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FOURTEENTH ANNUAL REPORT
OF THE
STATE BOARD OF HEALTH,
OF THE
STATE OF RHODE ISLAND,
FOR THE YEAR ENDING DECEMBER 31, 1891.
AND INCLUDING THE REPORT UPON THE REGISTRATION OF
BIRTHS, MARRIAGES AND DEATHS IN 1890.



PROVIDENCE:
E. L. FREEMAN & SON, STATE PRINTERS,
1892.

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DEC 31 1891
R.I. STATE BOARD OF HEALTH

MEMBERS
OF THE
RHODE ISLAND STATE BOARD OF HEALTH.
DECEMBER 31, 1891.

Post Office Address.

ALBERT G. SPRAGUE, M. D., <i>Chairman</i>	RIVER POINT.....	KENT COUNTY.
SAMUEL M. GRAY, C. E.....	PROVIDENCE.....	PROVIDENCE Co.
PAUL S. REDFIELD, M. D.....	PROVIDENCE.....	PROVIDENCE Co.
HENRY S. SWAN, M. D.....	BRISTOL.....	BRISTOL COUNTY.
ALVIN H. ECCLESTON, M. D.....	WOOD RIVER JUNC., WASHINGTON Co	
PETER F. CURLEY, M. D.....	NEWPORT.....	NEWPORT COUNTY.
CHARLES H. FISHER, M. D., <i>ex-officio and Secretary</i> ..	PROVIDENCE.....	PROVIDENCE Co.

1892

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GENERAL REPORT.

To the Honorable the General Assembly:

In behalf of the State Board of Health, the Secretary herewith respectfully presents the Fourteenth Annual Report of the said Board, including in brief outline the proceedings under its authority and supervision during the year 1891.

The Board, through various methods and agencies, has, together and in severalty, endeavored to perform to the fullest extent, within the limited powers and the limited financial aid allowed, the duties incumbent upon it. The work has been in the direction of performing the duties connected with the Cattle Commission and of conserving and promoting the health and the preservation of life of the citizens of the State in the present and in the future.

Investigations have been made as to causes of prevalent sickness, in various localities, endemic and epidemic, including causes of unusual mortality; investigations in regard to the circumstances and conditions of suspected sources of specific or general ill health; also in regard to actual and possible sources of pollution of water supplies, of sources and conditions of waters for public use, used wholly or in part as potable water, in villages, shore resorts, hotels and large boarding houses and contemplated water supplies for public use; the disposal of sewage; the drainage of houses as to sink wastes and laundry water; the giving of advice in regard to the methods of restricting the spread of contagious and infectious diseases, personally and by tracts and circulars; investigations in relation to the prevalence of diseases among domestic animals and various other matters pertaining to sanitation and the public health.

It is very gratifying to the Board, having ample facilities for acquiring a knowledge of the fact, that the statement can be made emphatically, that a very decided advance has been made during the year in

the public sentiment, of much the larger proportion of the population of the State, in regard to the necessity of personal hygiene and general sanitation.

PERSONNEL OF THE BOARD.

The membership of the Board continued through the year the same as at the beginning.

The third term of service of Albert G. Sprague, M. D., of Warwick, expired by limitation June 30, 1891. Gov. H. W. Ladd, at the May Session of the General Assembly, with the advice and consent of the Senate, reappointed Dr. Sprague for a term of six years from July 1, 1891.

MEETINGS OF THE BOARD.

There were four regular quarterly meetings during the year, at which the various measures needed to carry out the objects of the Board were discussed, and all questions having relation to the public health, directly or indirectly, received consideration.

At the meeting held on Thursday, January the first, the Secretary reported briefly a general outline of the work performed during the preceding quarter. Nuisances believed to be dangerous to health had been investigated in several localities. Particulars given.

The *Monthly Bulletin* had been prepared as heretofore, comprising 66 pages of printed matter during the quarter, of which the Secretary had written more than one-half.

Three hundred and forty-four letters had been written, 215 written communications had been received, including town clerks' monthly returns, and 36 printed circulars received desiring replies to certain questions or opinions upon certain points in sanitary propositions.

Blanks for the annual returns of births, marriages and deaths in 1889, had been distributed to town clerks to the number of 20,000, calling for about 400,000 items of fact connected therewith. Blanks for monthly returns of town clerks and physicians, and blanks and certificates for physicians, clergymen, undertakers, etc., sent as usual.

Progress was reported in the printing of the Thirty-Seventh Annual Report upon the Registration of Births, Marriages and Deaths in 1889, to the extent of 176 pages, and comprising 64 statistical tables.

An account was given of the results of various analyses of milk, molasses and vinegar. The object was to ascertain in some reasonably

approximate measure the extent to which the public was defrauded in the purchase of such articles. The samples were purchased in different towns and in each of the counties; 57 per cent. of the milk samples were found below the legal standard of 12 per cent. total milk solids, and $2\frac{1}{2}$ per cent. of fats; 34 per cent. of the samples contained more than 13 per cent. of total milk solids, and nearly 10 per cent. contained 15 per cent. of total milk solids.

Of the samples of molasses, purchased as of best quality and at full prices, $12\frac{1}{2}$ per cent. only, or one in every eight, was found to be true molasses.

Of the samples of vinegar, more than one-half were below the standard required by law; 62 per cent. was cider vinegar and 38 per cent. was manufactured vinegar.

One hundred and twenty-nine samples were analyzed. An account in fuller detail will be given in the annual report of the Board.

The Secretary stated that in those States where regular inspections and analyses have been continued for three or four years, of samples taken at random, here, there and everywhere, and at any time, the proportion of fraudulent samples of all kinds of food materials had very largely decreased.

In the Cattle Commission department no important infectious disease was found prevalent among domestic animals except glanders in horses. A very large number of horses were inspected during the quarter, with the result of finding 38 having confirmed glanders, all of which were destroyed.

The report was received and discussed at considerable length, and the measures taken and work performed were approved.

A general summary of the work of the Secretary and the results of the proceedings of the Board for 1890 were also given.

Various sanitary questions and work connected therewith were discussed in regard to their legal relations, the possibilities of the accomplishment of projected measures, and the probabilities of large beneficial results.

At the second quarterly meeting, held on Thursday, April 2d, 1891, after some general discussion of sanitary questions, the Secretary reported work performed during the preceding quarter of the year.

Progress was reported in the enumeration, arrangement and classification of the vital statistics of the State for 1890; the principal facts of the returns in relation to nearly 4,000 births, 2,800 marriages and 6,000 deaths had been analyzed and collated in primary tables. Re-

turns had not been received from all the towns, leaving by estimate, probably, 4,400 births, 400 marriages and 1,000 deaths yet to be heard from.

The Registration Report for 1889 had been issued from the press early in January and the copies distributed.

In the Cattle Commission department 266 hack, market, express and team horses had been inspected during the quarter. Thirty-six horses had been found glandered and were destroyed.

In the office, the *Monthly Bulletin* had been regularly issued with the usual data of meteorology and mortality, and analyses of reports of medical correspondents in respect to the prevalence of diseases.

Two hundred and forty-six letters had been written; 7,500 blanks had been supplied to different officials and correspondents for various kinds of returns.

The Secretary gave an account of legislation or lack of legislation in relation to the adulteration of food.

It was moved and voted that the Secretary be authorized to procure a type writing machine when in his judgment such machine would be of evident advantage in his work.

Dr. A. G. Sprague and C. H. Fisher were appointed delegates to the Conference of State and Provincial Boards of Health to be held in Washington, D. C., May 2-5, 1891.

At the third quarterly and also the annual meeting, held on Thursday, July 2, 1891, a nearly full complement of the members being present, various sanitary questions were quite largely considered.

The Secretary then gave an account of work during the previous quarter.

The facts connected with the publication of the *Monthly Bulletin* were stated, with suggestions and queries for the consideration of the Board.

The analysis of the various returns for the Annual Report of the Board from the medical correspondents, health officers, town clerks and others had been finished, with the addition of several papers having relation to the duties of the Board, and various Tables in relation to the prevalence of certain diseases and meteorological conditions.

The whole of the matter had been in the printer's hands several weeks.

The fundamental Tables of the Report upon the Registration of Births, Marriages and Deaths in Rhode Island, in 1890, had been compiled to the number of fourteen, and had been in the printer's

hands over four weeks, but no proofs of the printing had been received.

In the Cattle Commission department 594 horses had been inspected and 19 found glandered and destroyed. Tuberculosis had been found in two herds of cattle.

In the office work, aside from the report previously made for the preceding quarter, 305 letters had been written, 38 conferences held in relation to ventilation, drainage and nuisances, 8 examinations of premises, and the usual oversight of supply of blanks for the various returns of physicians, town clerks, undertakers, clergymen, etc.

Considerable discussion was given to questions of river and other water pollutions, and the duties connected with the Cattle Commission. S. M. Gray and the Secretary were appointed to draft resolutions or acts in relation thereto, for action thereon by the General Assembly.

In the health department, the Secretary reported that no epidemic had occurred during the quarter except at Valley Falls, from use of polluted water.

The following motions were made and passed: That the Secretary be and he is hereby authorized to make such sanitary inspections of State institutions, public buildings, compact villages and other premises as in his judgment may seem desirable, and his actual expenses in such work shall be allowed by the Board.

That the expenses of the Secretary while engaged in the work of receiving complete returns of facts connected with the events of births, marriages and deaths from town clerks and undertakers shall be allowed by the Board.

The Board then elected the following officers for the ensuing year:

For Chairman—Albert G. Sprague, M. D., Warwick.

For Secretary—Charles H. Fisher, M. D., Providence.

The fourth quarterly meeting was held on Thursday, October 15, 1891, by adjournment from October 1st, a quorum not appearing on that day.

After the disposal of several matters of business by the Board, the Secretary made his report of work during the preceding quarter.

Sixteen nuisances, public and private, regarded as dangerous to health had been investigated and abated, eighteen consultations in

relation to premises suspected of being unsanitary had been held at the office.

An account of the personal inspection of over one thousand horses during the quarter was given, with the result of finding but sixteen affected with glanders, as against fifty-two in the corresponding months in 1890.

Two hundred and forty-two letters had been written during the quarter.

Progress in the printing of the Registration Report for 1890 was reported to the number of 132 pages and 35 Tables.

The distribution of the various circulars, giving directions how to prevent and restrict contagious and infectious diseases, had been made in different localities as occasion seemed to demand.

An account was given of a visit, with Engineer S. M. Gray, to the Providence Cremation Works for the rendering of animal matter and destruction of garbage found in swill and other wastes.

The proceedings of the General Assembly in regard to bills drawn by the Secretary and introduced at the July Session, were reported. They had relation to the duties of the Cattle Commission, and the pollution of potable waters, especially as derived from rivers.

Matters in relation to the analyses of milk, water and food materials were discussed and the Secretary was authorized to procure such analyses as circumstances seemed to require.

S. M. Gray and C. H. Fisher were appointed a committee to comply with the request of the East Providence Water Works Commission, for an examination of the water of the Ten Mile river at Hunt's mills, and the proposed location of water works plant. Adjourned *sine die*.

In the subsequent pages of this report, there may be found accounts of the proceedings, more or less in detail, in regard to the subjects referred to committees for action thereon, or left with the Secretary for the same purpose.

OFFICE WORK.

An account of the varied work in the office was given at considerable length in the last preceding report of the Board, as to the direction, details and lines of such work.

It will be unnecessary to repeat the statements then made, farther than to add, to what was given as the work performed as Secretary and Health Commissioner, a reference to those duties appertaining to the office of State Registrar.

Those are the monthly and yearly collection of returns of births, marriages and deaths, comprising about 25,000 individual returns, each with from eight to ten different items of fact connected therewith, more than 250,000 in all, which receive personal examination, and for verification of which, more or less correspondence is required and not infrequently personal visitation. The oversight of the enumeration for the annual Registration Report of these items of fact and correction of errors, the preparation of comparative tables, the context of comment and explanation of upwards of ninety tables, requiring the noting of about 1,500,000 figures in the whole preparation, the oversight of printing, proof reading, binding and distribution, the supply of blanks of the various kinds to physicians, clergymen, town clerks, undertakers and others, comprise a large part of the work in that official department.

THE MONTHLY BULLETIN.

The publication of the *Monthly Bulletin* was continued to July and was then discontinued, whether temporarily or as a finality remained to be determined by circumstances. The Secretary was in doubt as to the good it had accomplished in the communities and especially among the teachers in the public schools.

After the suspension of publication, many letters, and personal expressions of regret therefor, came from various quarters and from persons engaged in various occupations.

In order to ascertain to what extent the *Monthly* had probably been of practical value to the teachers and through them to the general population in the State, the following circular was sent to all the superintendents of the public schools:

DEAR SIR:

The *Monthly Bulletin* has, as you are aware, been sent gratuitously to the public school teachers of the State during the last three years. The object has been to disseminate practical sanitary knowledge in the State in as nearly an equable distribution as possible. The school-rooms are the points most nearly representing the population, and from which knowledge of practical benefit to the citizen and the State, should emanate and radiate. The *Monthly* was placed at such points with the hope that the fundamental principles of hygiene might there find hearty acceptance and be of practical usefulness. The editor is uncertain as to the amount of benefit which may have been the results of such distribution. He should not give his time to the extra labor, nor should the State be put to the extra expense, unless the public good derived therefrom be commen-

surate therewith. It is for the purpose of obtaining an *entirely candid* and *absolutely unbiased* expression of opinion in regard to the uncertainties implied above, that the following question is submitted:

In your opinion, have the teachers in your jurisdiction given such attention to the subjects presented in the *Monthly Bulletin*, and derived such benefit to themselves and others from the sanitary information presented therein, as to warrant the continuance of the distribution of the publication to the said teachers under your superintendence?

To this interrogation replies were received attached to the circulars and otherwise written, from a considerable majority of the superintendents of the public schools and also from some school officers in different positions, in all of which, with three exceptions, the responses were emphatically in the affirmative. Reports in person from some not replying by mail, were to the same effect.

At the Forty-Seventh Annual Meeting of the Rhode Island Institute of Instruction in October, 1891, the following preamble and resolution was introduced by Supt. H. S. Tarbell of the Providence public schools, and the resolution was passed without dissent:

WHEREAS, The *Monthly Bulletin* of the Rhode Island State Board of Health has been published for the purpose of disseminating a knowledge of the fundamental principles of general sanitation and personal hygiene, and has, after a three years' issue, been discontinued by the Secretary under the impression that the publication did not accomplish its intended purpose in such measure as was hoped and desired, and therefore did not warrant its continuance, now, therefore,

Resolved, That the Rhode Island Institute of Instruction hereby gives expression of its regret at such discontinuance, and declares its opinion that the publication of the *Monthly Bulletin* has been of large value to the teachers of the State.

With such decided expressions of opinion from parties whose judgment was entitled, by reason of position and general intelligence, to the highest respect, it could hardly be otherwise than that the Secretary should be induced to resume the publication.

During the six months of publication the Secretary had written 41 articles, long and short; and during the year had prepared 12 summaries of deaths, with sex, parentage and ages; 24 pages of causes of deaths and number, with comments and percentages; and 24 pages of meteorological observations and summaries. Supervision was also given to printing, correcting proofs, addressing, wrapping, mailing and other methods of distribution of copies.

HEALTH IN THE STATE.

The general health of the State during 1891, so far as the prevalence of dangerous diseases may be considered, was unusually good.

No wide spread epidemic occurred during the year except of the infectious influenza, and the few epidemics that did occur, were limited to restricted localities and comprised the following diseases only, namely: Measles, typhoid fever and whooping cough.

The *Monthly Bulletin*, for one-half of the year, presented from month to month the general conditions of the public health and the degrees of prevalence of the more important diseases, and for the remaining part of the year, the Secretary prepared monthly reports, covering the same circumstances, which were published in the daily papers. The following are abstracts of such monthly reports in relation to the public health:

January.

Compared with the previous month, the amount of sickness of all kinds, taking the towns altogether, was, according to the reports of medical correspondents, about the same.

Compared with the corresponding month in 1890, the amount of sickness was very considerably less, and compared with the average of the same month for four years previous to January, 1890, the general amount was nearly the same.

Of the respiratory diseases, bronchitis and pneumonia were reported from every section, and as occurring in considerably large numbers and with varying degrees of severity.

Typhoid fever was very largely prevalent in the vicinity of Lonsdale and Berkeley, and sporadic in one-quarter of the towns elsewhere.

Malarial fever was prevalent in unusual numbers for the season, in three towns on the Blackstone river.

Whooping cough was epidemic in South Kingstown and moderately prevalent in Hopkinton and Pawtucket.

Diphtheria, scarlet fever, croup, influenza or la grippe, and diarrhoea, were reported as having sporadic occurrence in one-quarter of the towns and of moderate severity.

Chicken pox was epidemic in Warwick, and tonsillitis was unusually prevalent in several towns.

February.

The amount of general sickness throughout the State during the month was rather less than in the month of January preceding.

Taking the State at large, bronchitis, influenza, diphtheria, scarlatina, tonsillitis and rheumatism had slightly increased in prevalence, and pneumonia, typhoid fever, measles and whooping cough had decreased.

Scarlet fever had considerably larger prevalence in Providence and vicinity, and whooping cough in South Kingstown.

Compared with February, 1890, the amount of sickness was about 20 per cent. less in February, 1891. The difference consisting very largely in the smaller amount of pneumonia, influenza, diphtheria, scarlatina, measles, and whooping cough in 1891.

March.

Reports from correspondents showed that the amount of sickness, including all kinds, in March, was about the same as in the previous month, but was at least 20 per cent. less than in the corresponding month in 1890.

Compared with the preceding month, the influenza or la grippe had largely increased in area of prevalence, comprising about 70 per cent. of the towns, but of less severity of type than in the month of March, 1890.

The percentage of localities where diarrhoea and malarial fever were prevalent, was unusually large for the month of March. Bronchitis, pneumonia, scarlet fever, measles and whooping cough, were reported with slightly extended prevalence, and typhoid fever, croup, tonsillitis and diphtheria with a decreased prevalence.

No disease was reported as having epidemic prevalence except the influenza or la grippe.

April.

Otherwise than the influenza, the amount of general sickness had decreased from the previous month. Pneumonia and bronchitis still holding considerable prominence, partly as secondary to the influenza; and diphtheria, measles, scarlet fever and whooping cough prevailing with lessened numbers.

Malarial fevers were prevalent in some localities on the Blackstone and Woonasquatucket rivers in unusual numbers for the season.

May.

The reports of medical correspondents covering all sections of the State, indicated that for the month of May, the influenza or la grippe continued to be the most prevalent form of disease, excepting towns bordering on the lower Narragansett Bay, not only as continuations of the same disease in April, but also in the occurrence of new cases.

Bronchitis was reported as the next most prominent form of disease in a large proportion of the towns, although that disease, with pneumonia and other diseases of the respiratory organs, had diminished slightly in numbers but not in general severity.

Compared with the preceding month, diphtheria, typhoid fever, and scarlatina had slightly increased in area of prevalence, but of mild form and sporadic, scarlet fever only, having increased in numbers in Providence, East Providence and vicinity.

Compared with the previous month, the amount of general sickness varied considerably in the different towns, but taking the State at large the amount would seem to be about the same.

Measles had quite large prevalence in the vicinity of Kingston and Valley Falls.

Malarial fevers were also quite prevalent along the Blackstone and Woonasquatucket rivers.

No report of an epidemic prevalence in any locality of any contagious or infectious disease, except influenza.

June.

According to the reports of the medical correspondents, the influenza or la grippe had nearly disappeared during the last weeks in June, lingering mostly in the towns on the western border of the State. Compared with the preceding month, diseases of the respiratory organs had largely diminished, bronchitis only holding any important prevalence. Compared with the preceding month, the infectious diseases, diphtheria, measles, scarlatina and whooping cough, had greatly lessened in prevalence, not only in the number of cases, but in the number of localities. Measles was reported as having large prevalence only in Kingston and vicinity, and whooping cough in Valley Falls and vicinity.

Typhoid fever had little prevalence in the State, according to the reports, except in the vicinity of Carolina and at Valley Falls, where typhoid fever and fever from septicæmia were reported as having large prevalence, occasioned by the use of polluted water.

Malarial fevers were reported only from localities on the Blackstone river, except as sporadic and imported. The diseases of the alimentary organs had assumed considerable importance during the last half of the month.

Of the 36 deaths that occurred in Lincoln during the month of June, nine, or 25 per cent., were from cholera infantum. In Woonsocket the proportion was 14 per cent., in Pawtucket 9 per cent., and in Providence city only 4 per cent.

Compared with the corresponding month in 1890, there were in the total mortality about 15 per thousand more deaths from diarrhoeal diseases of all kinds in June, 1891, but the mortality from cholera infantum was in the proportion of about 30 more in every thousand deaths in June, 1891, than from the same disease in June, 1890.

July.

From the reports of medical correspondents for the month of July, it would appear that the amount of general sickness in much the larger proportion of the towns was rather less than the average of the same month in previous years. Of special diseases, compared with the preceding month, the reports indicate a considerable decrease of bronchitis, pneumonia, diphtheria, croup, scarlet fever, whooping cough and measles. The last two were reported as having large prevalence in two sections only; the whooping cough in Scituate and Foster and measles in the vicinity of Kingston. Diarrhoeal diseases had largely increased in a number of the larger towns. In Woonsocket the mortality from cholera infantum was more than 50 per cent. of the whole number of deaths from all other diseases; in Lincoln 36 per cent.; in Warwick 32 per cent.; North Providence, 33 per cent.; Providence, 15 per cent.; all in contrast with Newport, showing 4 per cent. There was no return of the mortality in Pawtucket for July.

Sporadic cases of typhoid fever reported from nearly one-half of the towns, occurring in mild form; malarial fever along the Blackstone river and large sickness at Valley Falls from the use of polluted water. The general amount of diarrhoeal diseases, other than cholera infantum, was not unusual for the season, and scarcely half of the amount in July, 1890. Compared with the corresponding month in 1890, there was about an equal prevalence of bronchitis, cholera infantum, malarial fevers, measles and whooping cough; a larger prevalence of typhoid fever and pneumonia, and a smaller prevalence of diphtheria in July, 1891.

August.

The amount of general sickness, including all sections of the State, was rather less the present year than in August, 1890. Of diarrhoeal diseases, all kinds, about 30 per cent. less; of cholera infantum about 25 per cent. less. About one-third of the towns reported a rather large amount of sickness, the rest an average of the previous five years or less. Respiratory diseases were quite infrequent comparatively. Of the infectious diseases, diphtheria, measles and scarlatina were reported from but very few localities and in very small numbers. Typhoid fever was reported from one-half of the towns in sporadic form. Whooping cough was rather largely prevalent in East Providence, Cumberland and in the vicinity of Centredale and Rockland, and moderately prevalent in three other localities.

Compared with Providence city the death rate from cholera infantum in Pawtucket was nearly twice as large, more than twice as large in Lincoln, nearly three times as large in Warwick and Newport city, and nearly four times as large in Woonsocket. The mortality from cholera infantum was 40 per cent. less in Providence city in August, 1891, than in the corresponding month in 1890, and the death rate from that disease was also smaller in nearly every section of the State in 1891.

The following will show the mortality from diarrhoeal diseases in August during three years:

	1889.	1890.	1891.
Cholera Infantum.....	116	196	159
Diarrhœa and Dysentery.	47	41	32
Other diarrhoeal diseases.....	34	32	21
Total.....	197	269	212

September.

The reports for the month of September indicated not above an average amount of general sickness during the month, taking the State at large, although cholera infantum and other summer diseases were prolonged later in the month than usual.

From seven localities diarrhœa was reported as having had quite unusually large prevalence, cholera infantum and dysentery, each large in two localities. Typhoid and malarial fevers were reported as having considerable prevalence in Pawtucket and Woonsocket and along the Blackstone river. No very large prevalence of any other disease was reported from any locality.

Compared with the preceding month the acute diseases, bronchitis, pneumonia, diphtheria and influenza, had slightly increased in numbers, and measles, scarlatina and whooping cough had decreased.

The mortality from diarrhœal diseases during the third quarter or summer months of 1891, as compared with the mortality during the same months of the three preceding years, was as follows:

	1888.	1889.	1890.	1891.
Cholera Infantum.....	334	280	432	358
Cholera Morbus.....	39	22	24	11
Diarrhœa	50	61	44	39
Dysentery.....	55	43	68	33
Enteritis, Gastro and Colo.....	..	..	52	56
Total	478	406	620	497

October.

The reports of medical correspondents throughout the State indicated that for October the general health in nearly every town and community was unusually good. Compared with the previous month there was a small increase of bronchitis and pneumonia and a larger increase in croup and influenza. Diphtheria, typhoid fever, scarlatina and whooping cough maintained about an equal prevalence in several localities, and diarrhœal diseases had diminished, although the prevalence of those diseases was still unusually large for the season. Malarial diseases still continued in rather large numbers in the valley of the Blackstone river. Typhoid fever had rather large prevalence in East Providence, Pawtucket, Warwick, Woonsocket and to some extent at the State Institutions in Cranston. Whooping cough cases prevailed in rather unusual numbers in East Providence, Warwick and Woonsocket. A peculiar catarrhal affection, with considerable biliary derangement and lasting some weeks, was quite prevalent in East Greenwich and vicinity during September and October.

Compared with the corresponding month in 1890, the general amount of sickness and the prevalence of special diseases, taking the State at large, was about the same.

November.

Compared with the preceding month, the general amount of sickness during November, including all kinds, was about the same, but varying somewhat in form or kind, according to the reports of medical correspondents.

The reports indicate an increase of typhoid fever of not less than 100 per cent.; of bronchitis and pneumonia about 60 per cent., and of influenza and whooping cough about 50 per cent., taking the State at large.

Diarrhoeal diseases of all forms had largely decreased in numbers, and diphtheria, scarlet fever, croup and measles had slightly lessened in general prevalence.

The influenza was quite prevalent in the vicinity of Carolina and Anthony, and moderately prevalent in several other localities. Measles prevailed quite largely in Woonsocket, mumps in Glocester, tonsillitis in Warwick, scarlet fever in Warwick, and whooping cough in the vicinity of Centredale, Washington and Woonsocket, and was epidemic in East Providence and Glocester.

Compared with the month of November in 1890, the general amount of disease was rather larger. There were nearly twice as many cases of typhoid fever in the State outside of Providence city, in which there were six or seven times as many, in November, 1891. There was also a rather larger prevalence of bronchitis and pneumonia in 1891.

December.

Reports from all sections indicated that there was a large increase of sickness throughout the State during December, as compared with the preceding two months. The epidemic influenza or la grippe, which had appeared in the central sections of Washington and Kent counties in November, had, by the middle of December, become epidemic in all sections, except a strip bordering on the western shore of Narragansett Bay, and with about the same degree of prevalence and with nearly the same degree of severity as in December, 1889.

Bronchitis and pneumonia were also very largely prevalent in all sections, and for the most part was secondary to la grippe. No other disease had wide spread prevalence except the ordinary catarrhal influenza, which in many cases it was difficult to differentiate from mild cases of la grippe.

Diarrhoeal diseases had largely disappeared, and nearly all other acute diseases not mentioned above, were less numerous, taking the State at large, than during the previous month.

In separate localities some of the contagious and infectious diseases had unusual prevalence.

Measles were present in numerous cases in Woonsocket, and to some extent in Washington and Arctic villages.

Scarlet fever in Warwick, whooping cough quite prevalent in East Providence. Warwick and Woonsocket, and epidemic in Glocester, and mumps epidemic in Glocester.

Compared with the corresponding month in 1890, the amount of sickness was nearly twice as large, the excess in December, 1891, consisting entirely of diseases of the respiratory organs and passages, and such neuroses or diseases of the nervous system as were occasioned by la grippe.

SECRETARY'S REPORT.

HEALTH IN THE TOWNS.

1891.

HEALTH OF TOWNS.

PHYSICIANS' REPORTS.

In order to present, from year to year, a connected history of the comparative prevalence of zymotic and other important diseases, and especially when of epidemic occurrence, it has seemed necessary that there should be given an account of the diseases occurring in the different towns during each year, that is, as to amount of general sickness, the kinds and type of zymotic and other acute diseases that have had prevalence, the relative number compared with other years, general severity, season of occurrence, and locality of special prevalence ; and also other facts in relation to the sanitary sentiment of the communities, and suspected sources of ill health.

Therefore, as in previous years, the plan of soliciting from the regular medical correspondents of the Board, and other physicians, a report at the commencement of each year, covering, in a general way, the whole of the preceding year, in relation to the amount of sickness of all kinds, the prevalence of particular diseases, and the sanitary conditions and movements in their respective localities, has been continued, and the circular presented on the following page sent therefor :

OFFICE OF THE SECRETARY OF THE STATE BOARD OF HEALTH.

CIRCULAR No. 128.

PROVIDENCE, January 1, 1892.

The Secretary of the State Board of Health desires to obtain from respectable physicians in every section of the State an Annual Report covering the whole twelve months preceding the above date.

The following questions will indicate the information sought, and the general plan of such report ; but correspondents need not be confined to replies to the questions presented, all the freedom being allowable of such additions as the circumstances or peculiarities of each locality may seem to warrant.

These annual reports are desired for the purpose of presenting the status of the public health and the sanitary sentiment existing in the different sections of the State, during the year 1891, in the Fourteenth Annual Report of the State Board of Health.

They should be returned to the Secretary of the Board by the third week in January if possible.

Any additional postage stamps needed to cover postage on more extended consideration of the topics suggested, or any other topic having relation to the public health, will be immediately refunded on receipt of papers.

QUESTIONS.

1. Name of town and circuit.
2. Including sickness of all kinds, has the general amount been more or less in your circuit during the past year than the average of previous years ? What proportion ?
3. If any of the following zymotic diseases have prevailed in your circuit during the the past year, please state when sporadic and when epidemic, whether mild, average or severe, and in what months they occurred, and in what localities.

	Sporadic or Epidemic.	Degree of Severity.	Months.	Locality.
a. Cholera Infantum.				
b. Croup.				
c. Diarrhœa and Dysentery.				
d. Diphtheria.				
e. Fever, Malarial.				
f. Fever, Typhoid.				
g. Influenza.				
h. Measles.				
i. Scarlatina.				
j. Whooping Cough.				
4. Any other zymotic diseases epidemic.				
5. Of other diseases not specially zymotic.				

Also, please state what degree of prevalence, whether large, average or small, and in what months was the occurrence of the following named diseases. State degree of prevalence and time of occurrence under the headings following :

	DEGREE OF PREVALENCE.	MONTHS.
k. Brain, Inflammation and Congestion of.		
l. Bronchitis, Acute.		

DEGREE OF PREVALENCE.	MONTHS.
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m. Pneumonia.

n. Rheumatism.

o. Stomach, Acute diseases of.

6. What other diseases have had unusually large prevalence during the past year ?

7. What diseases have been attended with unusual fatality ?

8. Had the sanitary surroundings of any of the cases of the following diseases been such as to promote their occurrence ? What proportion of the cases, if any ?

Diphtheria.

Typhoid fever.

Scarlet fever.

9. Has there been, in your opinion, any advance in public sentiment or views of individuals, in your circuit, in regard to the importance of sanitary surroundings : or any increased interest in means of preventing diseases ? State what reasons for belief.

10. Is effective isolation and disinfection, in cases of infectious and contagious diseases, practiced in your circuit ?

11. Name of Physician,

M. D.

Very respectfully,

CHAS. H. FISHER,

Sec. State Board of Health.

The following extract from the Public Statutes, in relation to the duties of town and local boards of health, and practicing physicians, was also appended :

PUBLIC STATUTES, CHAPTER 83.

SEC. 6. The secretary of the said board shall make inquiry from time to time, of the clerks of town and local boards of health and PRACTICING PHYSICIANS, in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease, or causes of general ill-health, and also in relation to the proceedings of the said boards of health in respect to acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals in their several towns and localities respectively ; and the said clerks of town and local boards of health, and the said PRACTICING PHYSICIANS shall give such information, in reply to said inquiries, of such facts and circumstances as shall have come to their knowledge.

REPLIES.

The reports, on the following pages, received from local correspondents and others of the medical profession in the several cities, towns and villages of the State, will give a good representation of the general status of the public health during the year 1891, as to the presence or absence of epidemics or endemics, or large prevalence of important or unusual diseases in the several locations, the sanitary conditions and improvements, if any, in their several circuits, and other suggestions in response to the preceding circular.

ANNUAL REPORTS OF PRACTICING PHYSICIANS.

BRISTOL COUNTY.

1. BRISTOL.
2. Including sickness of all kinds, the general amount has been 20 per cent. less in my circuit during the past year than in the average of previous years.
3. Zymotic diseases have prevailed in my circuit during the year as follows :
Cholera Infantum. Very few. Summer.
Diarrhœa and Dysentery. Sporadic. Average severity. Summer and autumn.
Diphtheria. No cases known.
Fever Malarial. None.
Fever, Typhoid. Sporadic. Average severity. Autumn.
Influenza. Epidemic. Average. November and December.
Measles. No cases.
Scarlatina. No cases.
Whooping Cough. No cases.
4. No other zymotic disease epidemic.
5. Of other diseases. .
Bronchitis, Acute. Average prevalence. Winter and spring.
Pneumonia. Small prevalence. Winter and spring.
Rheumatism. Average prevalence. Spring and fall.
6. No other diseases had unusually large prevalence.
7. No diseases attended with unusual fatality.
8. The sanitary surroundings of the cases of the following disease seemed to be such as to promote their occurrence.
Typhoid Fever. All the cases.
9. There has been advance in public sentiment and in views of individuals in regard to the importance of sanitary surroundings, as shown by the expression of opinion on the part of various persons.
10. Effective isolation and disinfection in cases of infectious and contagious diseases has been practiced in part.

HENRY S. SWAN, M. D.

1. WARREN AND BARRINGTON.

2. Including sickness of all kinds the general amount has been 20 per cent. more in my circuit during the past year.

3. The following zymotic diseases have prevailed in this circuit during the past year :

Cholera Infantum. Sporadic. Mild. Summer. Different localities.

Croup. Sporadic. Mild. Autumn. Different localities.

Diarrhœa and Dysentery. Sporadic. Mild. Summer. Different localities.

Diphtheria. Sporadic. Mild. Autumn. Different localities.

Fever, Malarial. Sporadic. Much less than previous years. Different localities.

Fever, Typhoid. Sporadic. Much less than previous years. Different localities.

Influenza. Sporadic. Milder and less than previous years. Different localities.

N. B. In Warren proper, Influenza has attacked a decidedly smaller proportion of the inhabitants than in previous years (1890 and 1891), but in Barrington and outlying districts it compares in number attacked with other localities in Rhode Island, being generally epidemic. A remarkable thing to note here in Warren, is the fact, corroborated by the French physicians, of the immunity of the Canadian French in the town from influenza.

Measles. None.

Scarlatina. None.

Whooping Cough. None.

4. No other zymotic disease epidemic.

5. Of other diseases. All sporadic. Mild. Scattering.*

Brain, Inflammation and Congestion of. Limited prevalence.

Bronchitis, Acute. Increased number. Spring.

Pneumonia. Increased number. Spring.

Rheumatism. Increased number. Spring and autumn.

Stomach, Acute diseases of. Limited number. Summer.

6. No other diseases had usually large prevalence.

7. The diseases attended with unusual fatality, were Pneumonia and Catarrhal Fever followed by Capillary Bronchitis.

8. That the sanitary surroundings of the cases of the following diseases were such as to promote their occurrence, can say :

Of Diphtheria, not that I could distinctly determine.

Of Typhoid Fever and Scarlet Fever. Generally less this past year.

9. The Health officer has faithfully attended to his duties, and to the best of my belief, all cases of unsanitary conditions have been attended to by him on due notice.

10. Effective isolation and disinfection in cases of infectious and contagious diseases is practiced in this circuit.

G. L. CHURCH, M. D.

KENT COUNTY.

1. COVENTRY and parts of adjoining towns.

2. Including sickness of all kinds, the general amount has been about one tenth more in my circuit during the past year than the average of previous years.

3. Zymotic diseases have prevailed during the past year as follows :

Cholera Infantum. Sporadic. Was severe in August at Washington and Coventry Centre.

Croup. Sporadic. Was severe in winter months. Coventry.

Diarrhoea and Dysentery. Sporadic. About average severity. Summer and fall months.

Diphtheria. Sporadic. Spring and winter, and was not malignant.

Fever, Malarial. None except imported cases.

Fever, Typhoid. Sporadic. Two cases only. Average severity. December.

Influenza. Epidemic. Very severe with the aged. Winter months. Everywhere.

Measles. About the average number of cases and average severity. Fall and winter.

Scarlatina. None.

Whooping Cough. Prevalent but mild.

4. No other zymotic diseases epidemic.

5. Of other diseases.

Brain, Inflammation and Congestion of. Occasionally throughout the year.

Bronchitis, Acute. Spring and fall. Average severity.

Pneumonia. Very prevalent in March, April, November and December.

Rheumatism. Throughout season occasionally.

Stomach, Acute diseases of. Very few. In summer.

6. No other diseases had unusually large prevalence during the year.

7. No diseases attended with unusual fatality.

8. The sanitary surroundings of any of the cases did not seem to be such as to promote their occurrence.

9. No great advance in public sentiment in regard to the importance of sanitary surroundings, but some of our citizens are trying to improve matters.

10. Effective isolation and disinfection in cases of infectious and contagious diseases are practiced in this circuit only by strenuous efforts of the attending physicians.

F. B. SMITH, M. D.

1. COVENTRY AND WARWICK.

2. Including sickness of all kinds the general amount has been about the same during the past year as the average of previous years.

3. The following zymotic diseases have prevailed.

Cholera Infantum. Sporadic. Severe. July and August. Centerville.

Croup. None.

Diarrhœa and Dysentery. Sporadic. Mild. All the year. General distribution. Most warm months.

Diphtheria. Sporadic. Mild. All the year. General distribution.

Fever, Malarial. Sporadic. Mild. All the year. General distribution.

Fever, Typhoid. None.

Influenza. Epidemic. Severe. December. Everywhere.

Measles. None.

Scarlatina. None.

Whooping Cough. A few sporadic cases only.

4. No other zymotic diseases.

5. Of other diseases.

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Mostly cases resulting from Influenza or La Grippe. Cold months.

Pneumonia. A large amount during December only, resulting from La Grippe.

Rheumatism. More than usual during the year.

Stomach, Acute diseases of. None.

6. No other diseases had unusually large prevalence.

7. None attended with unusual fatality.

8. Sanitary surroundings not promotive of any disease prevailing.

9. Do not discover any advance in public sentiment or views of individuals in this circuit in regard to the importance of sanitary surroundings.

10. Isolation and disinfection in cases of infectious and contagious diseases not generally practiced in this circuit.

JOHN WINSOR, M. D.

1. EAST GREENWICH and surrounding towns.

2. Including sickness of all kinds the general amount has been rather more in this circuit during the past year.

3. The following zymotic diseases have prevailed during the past year.

Cholera Infantum. Sporadic. Mild in most cases. August and September. East Greenwich village.

Croup. Sporadic. No fatal case. March and April. East Greenwich village.

Diarrhoea and Dysentery. Sporadic. Not unusually severe. July and August.

Diphtheria. No case of Diphtheria in my practice. Follicular Tonsillitis quite prevalent during January, March and April.

Fever, Malarial. Not a malarial district. A few cases, however, have come here from other districts.

Fever, Typhoid. Sporadic. Not severe. August and September. East Greenwich.

Influenza. Epidemic. Quite severe. November and December. East Greenwich village. Kent County in general.

Measles. Sporadic. Mild. February and March. East Greenwich.

Scarlatina. An epidemic of Rosiola prevailed during May and June, but no cases of Scarlatina. East Greenwich.

Whooping Cough. Sporadic. Mild. March, April and May. East Greenwich.

4. No other zymotic diseases epidemic.

Icterus prevailed as an epidemic here during the months of September and October. In some cases quite severe, mostly among the children, although many adults suffered from it.

5. Of other diseases.

Brain, Inflammation and Congestion of. Small number. Not confined to season.

Bronchitis, Acute. Large amount. Cool months.

Pneumonia. Average amount. Cool months.

Rheumatism. Average amount. All seasons.

Stomach, Acute diseases of. A few cases.

6. No other diseases had unusually large prevalence during the year.

7. Pneumonia preceded by Influenza was attended with unusual fatality.

8. The sanitary surroundings of some of the cases of Typhoid and Scarlet Fevers, were such as to promote their occurrence.

9. Some advance in public sentiment in regard to the importance of sanitary surroundings. The question of a system of sewerage is being agitated.

10. Effective isolation and disinfection in cases of infectious and contagious diseases are practiced in this circuit very generally.

CHAS. H. EARLE, M. D.

1. WARWICK.

2. Including sickness of all kinds the general amount has been about ten per cent. more in my circuit during the past year than the average of previous years.

3. The following zymotic diseases have prevailed during the past year.

Cholera Infantum. Sporadic. Average severity. Summer. General.

Croup. Sporadic. Mild. Autumn.

Diarrhoea and Dysentery. Sporadic. Average severity. Summer.

Diphtheria. Sporadic. Mild. Year around.

Fever, Malarial. Very few cases and mild.

Fever, Typhoid. Sporadic. Mild. Fall and winter.

Influenza. Epidemic. Severe. December. Scattered all around.

Measles. Mild and few.

Scarlatina. Mild and few.

Whooping Cough. Sporadic. Severe. Fall. Natick mostly.

4. No other zymotic disease epidemic.

5. Of other diseases.

Bronchitis, Acute. Severe and very many cases during November and December, following the Influenza.

Pneumonia. Severe and very many cases during November and December, following the influenza.

Rheumatism. Average prevalence.

Stomach, Acute diseases of. Ordinary amount. In summer.

6. No other diseases had unusually large prevalence during the year.

7. Pneumonia was attended with unusual fatality.

8. The sanitary surroundings of any of the cases of the following diseases did not seem to be such as to promote their occurrence, viz : Diphtheria, Typhoid Fever and Scarlet Fever.

9. I think there is some advance in public sentiment and in views of individuals in this circuit, in regard to the importance of sanitary surroundings.

10. Effective isolation and disinfection in cases of infectious and contagious diseases have been practiced in this circuit.

M. J. E. LEGRIS, M. D.

PROVIDENCE COUNTY.

1. CENTREDALE, PROVIDENCE, JOHNSTON, NORTH PROVIDENCE, SMITHFIELD, BURRILLVILLE AND GLOCESTER.

2. Including sickness of all kinds, as to the general amount in my circuit during the past year, I should think there had been fully one third less.

3. Zymotic diseases have prevailed in my circuit during the past year as follows :

Cholera Infantum. None.

Croup. Very little.

Diarrhœa and Dysentery. Sporadic. Mild. Summer. Woonasquatucket Valley.

Diphtheria. None.

Fever, Malarial. Sporadic. Mild. Fall. Not located.

Fever, Typhoid. Epidemic. Mild. Fall. Valley towns.

Influenza. Epidemic. Medium severity. Winter. Much scattered.

Measles. Epidemic. Medium. Summer. Scattered.

Scarlatina. None.

Whooping Cough. Epidemic. Very severe. All year. Scattered.

4. No other zymotic diseases epidemic.

5. Of other diseases.

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Severe and prevalent. Winter and spring.

Pneumonia. Very little except following Influenza.

Rheumatism. Very little.

Stomach, Acute diseases of. Much less than usual.

6. No other disease had unusually large prevalence during the year.

7. None attended with unusual fatality.

8. As to the causes of Typhoid Fever, I could find nothing that would give me any clue to the origin.

9. As to any advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings, I find a general improvement is observable. Premises are cleaner. People more watchful.

10. Effective isolation and disinfection in cases of infectious and contagious diseases were practiced in this Circuit. In Johnston the Board of Health was very active. North Providence and Smithfield should have Boards of Health. None exist.

CHAS. A. BARNARD, M. D.

1. VALLEY FALLS and towns adjoining.

2. Including sickness of all kinds the general amount has been about the same as the average of previous years.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Mild. August and September.

Diarrhoea and Dysentery. Sporadic. Mild. Summer and fall.

Fever, Malarial. Sporadic. Mild. From May to November.

Fever, Typhoid. Sporadic. Mild. September and October.

Influenza. Epidemic. Mild. December.

Whooping Cough. Sporadic. Mild. May and June.

4. Septic Fever. Endemic. Severe. June, July, and August. From polluted drinking water.

5. Other diseases.

Bronchitis, Acute. Average prevalence. Spring and fall.

Pneumonia. Small prevalence. March and April.

Rheumatism. Average prevalence. The whole year.

Stomach, Acute diseases of. Average prevalence. July and August.

6. No other diseases had unusually large prevalence during the year.

7. None attended with unusual fatality.

9. Do not observe any advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings, or any increased interest in means of preventing diseases.

10. Isolation and disinfection in cases of infectious and contagious diseases were not very fully practiced in this circuit.

GEO. B. HAINES, M. D.

1. CUMBERLAND AND LINCOLN.

2. Including sickness of all kinds the general amount has been one-third more in my circuit during the past year.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Mild. July and August. Valley Falls and Lonsdale.

Croup. Sporadic. Severe. October. Valley Falls.

Diarrhœa and Dysentery. Sporadic. Mild. October. Valley Falls and Lonsdale.

Diphtheria. Sporadic. Mild. July. Lonsdale and Valley Falls.

Fever, Malarial. Large prevalence. Mild. June, July, August and September. Cumberland and Lincoln.

Fever, Typhoid. Epidemic. Severe. June, July, August and September. Valley Falls.

Influenza. Epidemic. Severe. December. Cumberland and Lincoln.

Measles. Sporadic. Mild. June. Valley Falls.

Scarlatina. Sporadic. Mild. April. Lonsdale.

Whooping Cough. Epidemic. Severe. May, June and July. Valley Falls.

4. No other zymotic diseases epidemic.

5. Other diseases.

Bronchitis, Acute. Average prevalence. January, February, March and April.

Pneumonia. Average prevalence. March.

Rheumatism. Average prevalence. September and October.

Stomach, Acute diseases of. Average prevalence. June, July and August.

6. Diarrhœa had unusually large prevalence during the summer months.

7. Diseases attended with unusual fatality were La Grippe with Pneumonia.

8. The sanitary surroundings of all the cases of Diphtheria and Typhoid Fever were such as to promote their occurrence; of Scarlet Fever they were quite variable.

9. Town council passed an ordinance preventing emptying of cesspools and the removal of night soil during the day time, after the fifteenth day of May until the fifteenth day of September.

10. No effective isolation and disinfection in cases of infectious and contagious diseases were generally practiced in this circuit. T. J. SMITH, M. D.

1. EAST PROVIDENCE and vicinity, mostly Watchemoket.

2. Including sickness of all kinds the general amount was rather more in my circuit during the past year than the average of previous years.

3. There was a prevalence of the following zymotic diseases in my circuit during the past year.

Cholera Infantum. Epidemic. Severe. Summer. Watchemoket.

Croup. Sporadic. Mild.

Diarrhoea and Dysentery. Epidemic. Severe. Summer. Watchemoket.

Diphtheria. Sporadic. Mild. Throughout year.

Fever, Malarial. None.

Fever, Typhoid. Epidemic. Mild. September, October and November.

Influenza. Epidemic. Severe. February to May. Very severe last of December. Pandemic.

Scarlatina. Sporadic. Mild. Spring. Watchemoket.

Whooping Cough. Epidemic. Severe. Throughout the year, worse in summer and fall months. Watchemoket.

4. No other zymotic diseases epidemic.

5. A large amount of skin diseases during the fall—Herpes Eczema and Erysipelas.

Brain, Inflammation and Congestion of. Average prevalence. Throughout year.

Bronchitis, Acute. Large prevalence. February to May, and October to January.

Pneumonia. Large prevalence during Spring and December.

Rheumatism. Average prevalence.

Stomach, Acute diseases of. Small.

6. Respiratory diseases generally had unusually large prevalence during the year.

7. The diseases attended with unusual fatality were La Grippe with old people, Whooping Cough, Cholera Infantum.

8. I could not see that the surroundings of any of the cases of the following diseases were such as to promote their occurrence, viz.: Diphtheria, Typhoid Fever and Scarlet Fever.

I think Dysentery could be traced to direct causes.

9. No advance in public sentiment or views of individuals noticeable, in regard to the importance of sanitary surroundings, or means of preventing diseases. No attention is paid to house drainage—it interferes with the landlords.

10. Isolation in some cases of infectious and contagious diseases was practiced. Where infectious cases are reported cards are placed on the houses to that effect.

SIMEON HUNT, M. D.

1. EAST PROVIDENCE CIRCUIT, EAST PROVIDENCE CENTRE and vicinity.
2. Including sickness of all kinds the general amount has been more in my circuit during the past year.
3. The following zymotic diseases have prevailed during the year.
Cholera Infantum. Sporadic. Mild. July and August.
Croup. Sporadic. Severe. November and December.
Diarrhœa and Dysentery. Sporadic. Average severity. August.
Diphtheria. Sporadic. Severe. December.
Fever, Malarial. Endemic. Severe. Spring months.
Fever, Typhoid. Sporadic. Severe. August and September.
Influenza. Epidemic. Severe. December.
Measles. None.
Whooping Cough. Epidemic. Severe. March, April and May.
4. No other zymotic diseases epidemic.
5. Other diseases.
Brain, Inflammation and Congestion of. None severe.
Bronchitis, Acute. Large prevalence. November and December.
Pneumonia. Large prevalence. December.
Rhenumatism. Average prevalence. All the year.
6. No other diseases have had unusually large prevalence during the year.
7. The diseases attended with unusual fatality were Pneumonia and Typhoid Fever.
8. The surroundings of the cases of the following diseases were such as to promote their occurrence: Diphtheria, Typhoid Fever and Scarlet Fever. This is all due to poor drainage.
9. I think there is some advance in public sentiment in regard to the importance of sanitary surroundings. People seem to be interested in the Board of Health.
10. Effective isolation and disinfection in cases of infectious and contagious diseases were practiced in my circuit.

ELMER E. MOORE, M. D.

1. GLOCESTER AND BURRILLVILLE.
2. Including sickness of all kinds the general amount has been about an average, during the past year, with the average of previous years.
3. Zymotic diseases have prevailed in my circuit during the year as follows:
Cholera Infantum. Sporadic. Severe. September. Village.
Diarrhœa and Dysentery. Sporadic only. Average severity. Warm months, Scattered.
Diphtheria. Sporadic. Mild. July and August. Village.
Fever, Malarial. Sporadic. Mild. October. Harmony.

Fever, Typhoid. Sporadic. Mild. October and November. Scattered.

Influenza. Epidemic. Average severity. December. Everywhere.

Measles. None.

Scarlatina. None.

Whooping Cough. Epidemic. Average severity. September to end of year. Chepachet and eastward in Gloucester and Burrillville.

4. No other zymotic diseases epidemic.

5. Of other diseases.

Brain, Inflammation and Congestion of. Small prevalence only.

Bronchitis, Acute. Average prevalence. Cold months.

Pneumonia. Small prevalence. December. In connection with Influenza.

Rheumatism. Small prevalence.

Stomach, Acute diseases of. Small prevalence.

6. No other diseases have had unusually large prevalence during the year.

7. None attended with unusual fatality.

8. Have not observed that the surroundings of any of the cases of Diphtheria or Typhoid Fever were such as to promote their occurrence.

9. No advance in public sentiment or views of individuals noticed in regard to the importance of sanitary surroundings, or any increased interest in means of preventing diseases.

10. Effective isolation and disinfection in cases of infectious and contagious diseases have been practiced in this circuit. No case has been traceable to another.

G. A. HARRIS, M. D.

1. LINCOLN and adjoining towns.

2. There has been a general increase of sickness the past year, equal to 20 per cent.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Mild. July and August. Central Falls.

Croup. Sporadic. Average severity. Winter.

Diarrhœa and Dysentery. Sporadic. Mild. Summer months. General.

Diphthêria. Sporadic. Mild. Winter months.

Fever, Malarial. General increase. Spring, summer and fall. Generally mild.

Fever, Typhoid. Sporadic. Increased number of cases. Mild. Autumn. Central Falls.

Influenza. Epidemic. Severe. November and December.

Measles. Sporadic. Average severity. Fall months.

Scarlatina. Sporadic. Average severity. October, November and December.

Whooping Cough. Epidemic. Average severity. October, November and December. Saylesville and Central Falls.

4. No other zymotic diseases epidemic.

5. Average amount of other diseases.

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Large increase. January, February, March, and November and December.

Pneumonia. Large increase. January, February, March, and November and December.

Rheumatism. Large increase. Spring, fall and winter.

Stomach, Acute diseases of. Average. Entire year.

6. Throat diseases, such as Laryngitis and Tonsillitis, had unusually large prevalence during the past year. Spring, fall and winter.

7. The diseases attended with unusual fatality were Pneumonia and Bronchitis following Influenza.

8. It may be said of Diphtheria, Typhoid Fever, and Scarlet Fever, that in a small proportion of cases the sanitary surroundings, if not actually promoting these diseases, stand in need of improvement.

9. The adoption of a system of sewerage and its extension through the more thickly settled portions of the Central Falls Fire District would indicate increased attention to sanitation. No other advance in public or individual sentiment noticed.

10. Isolation and disinfection in cases of infectious and contagious diseases are practiced as far as possible, but not in any case by public authority, excepting in case of small pox.

WILLIAM VON GOTTSCHALK, M. D.

1. PAWTUCKET AND CENTRAL FALLS.

2. Including sickness of all kinds the general amount has been, during the past year, about an average of previous years.

Much less acute sickness until December. Cannot give proportion.

3. The following zymotic diseases have prevailed in my circuit during the past year.

Cholera Infantum. Scarcely any.

Diarrhœa and Dysentery. Sporadic. A verage severity. January, 1891, summer months and November. Centre of city.

Fever, Malarial. Endemic. Average severity. March and following months. Near places where it is alternately wet and dry, or near low dampground. The variety comes wholly under the head of "Intermittent Incompleta."

Fever, Typhoid. Sporadic. Mild. October and November. Different localities.

Influenza. Epidemic. Severe. December. All over the city.

4. No other zymotic disease epidemic.

5. Of other diseases.

Bronchitis, Acute. Large amount. December.

Pneumonia. Average amount. December.

Rheumatism. Small amount.

Stomach, Acute diseases of. Average amount. All the year at different times.

6. No other diseases had unusually large prevalence,

7. No diseases attended with unusual fatality, except chest diseases in connection with the Grippe in December.

Typhoid Fever. In one case large drain emptied into low land back of the house. Cannot say certainly that fever was caused by it.

9. No perceivable advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings. Water still used from wells surrounded by privies. Slops emptied in yards, etc.

10. In regard to isolation and disinfection in cases of infectious and contagious diseases, have known of no such disease the last year, except typhoid fever.

EMMA A. PHILLIPS, M. D.

1. PAWTUCKET.

2. Including sickness of all kinds the general amount has been, during the past year, about an average of previous years.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Very little.

Diarrhœa and Dysentery. Very little. Usual season.

Fever, Malarial. Considerable. Warm months.

Fever, Typhoid. Not large prevalence.

Influenza. Large amount. January, February and March, April and December.

4. No other zymotic diseases epidemic.

5. Of other diseases.

Brain, Inflammation and Congestion of. Slight prevalence.

Bronchitis, Acute. Considerable prevalence. Cool months.

Pneumonia. Winter and spring.

Rheumatism. Some. Not much in amount.

Stomach, Acute diseases of. None.

6. Except as above no diseases had unusually large prevalence during the year.

7. None attended with unusual fatality.

8. The sanitary surroundings of none of the cases of Typhoid Fever were such as to promote their occurrence.

9. Do not see any advance in public sentiment or views of individuals, in my circuit, in regard to the importance of sanitary surroundings, or increased interest in means of preventing diseases.

10. Isolation and disinfection in cases of infectious and contagious diseases are usually practiced in my circuit.

CHAS. A. STEARNS, M. D.

1. PROVIDENCE CITY.

2. Including sickness of all kinds the general amount has been rather more during the past year than the average of previous years.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Less than usual. Moderate severity. Summer. City.

Croup. Less than usual. Moderate severity. Cold months.

Diarrhoea and Dysentery. Average amount. Moderate severity. Summer.

Diphtheria. Less than usual. About average severity. Colder months. City.

Fever, Malarial. Less than previous years. Average severity. Colder months.

Fever, Typhoid. Sporadic. Average severity. November and December.

Influenza. Great excess. Severe. November and December.

Measles. Average number. Not severe. Different dates.

Scarlatina. Average number. Not severe. All through the year.

Whooping Cough. Average or less. Sporadic. Not severe. All through the year.

4. No other zymotic disease epidemic

5. Other diseases.

Bronchitis, Acute. In excess of average. Colder months.

Pneumonia. In excess of average. Colder months.

Rheumatism. Less than average. Colder months.

Stomach, Acute diseases of. No more than ordinary.

6. No other diseases had unusually large prevalence during the year.

7. The diseases attended with unusual fatality were Influenza and Pneumonia.

8. The sanitary surroundings of the cases of Diphtheria, Typhoid Fever and Scarlet Fever were not such as to promote their occurrence in any special manner.

9. There is some advance in public sentiment and in views of individuals in regard to the importance of sanitary surroundings and means of preventing diseases. People talk about the matter more than formerly, and are therefore in a way for instruction in matters pertaining to sanitation.

10. So far as I know effective isolation and disinfection in cases of infectious and contagious diseases are practiced in this city.

P. S. REDFIELD, M. D.

1. PROVIDENCE CITY.

2. Including sickness of all kinds the general amount has been rather above the average during the past year.

3. The following zymotic diseases have prevailed.

Cholera Infantum. Small number. Usual severity. Usual season.

Croup Small number. Usual severity. Cooler months.

Diarrhœa and Dysentery. Moderate number. Usual severity. Usual season.

Diphtheria. Sporadic. Usual severity. Through the year.

Fever, Malarial. Very small number. Variable severity. All seasons.

Fever, Typhoid. A few cases only. Usual severity. Autumn

Influenza. Epidemic. Generally severe during December.

Measles. None.

Scarlatina. Occasional cases. Generally mild. All the year.

Whooping Cough. Occasional cases during the entire year.

4. No zymotic disease epidemic except Influenza.

5. Other diseases.

Brain, Inflammation and Congestion of. Small number only.

Bronchitis, Acute. Large prevalence. January and February, November and December.

Pneumonia. Large number. During the spring and fall.

Rheumatism. Average number of cases.

Stomach, Acute diseases of. None except in complication with others.

6. No other diseases had unusually large prevalence.

7. Pneumonia, particularly among elderly people, was attended with unusual fatality.

8. The sanitary surroundings of none of the diseases seemed to be such as to promote their occurrence.

9. There is a decided advance in public sentiment in regard to the importance of sanitary surroundings and means of preventing disease, as shown by increased discussion regarding sewerage and the supply of good water for household use, etc.

10. Effective isolation and disinfection in cases of infectious and contagious diseases are practiced in this city.

GEO. D. HERSEY, M. D.

1. PROVIDENCE, JOHNSTON AND CRANSTON.

2. Including sickness of all kinds, the general amount has been above the average during the past year, of that of previous years.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Average amount. Warm months.

Croup. Not as much as usual.

Diarrhœa and Dysentery. Large amount. Average severity. Summer and fall.

Diphtheria. Sporadic. Considerable number. Average severity. October, November and December.

Fever, Malarial. Less. Average severity. All about.

Fever, Typhoid. Sporadic. Average severity. Mostly November and December. City and suburbs.

Influenza. Large in January and February. Epidemic in December. Severe. All localities.

Measles. Sporadic. Usual severity. November and December.

Scarlatina. Sporadic. Usual severity. Fall. City and suburbs.

Whooping Cough. Large number. Severe. November and December. Oneyville.

4. No other zymotic diseases epidemic.

5. Of other diseases.

Brain, Inflammation and Congestion of. Few cases. May and September.

Bronchitis, Acute. Large prevalence. January to May, November and December.

Pneumonia. Rather above average number. January to June, and December.

Rheumatism. Not a large number. November and December.

Stomach, Acute disease of. More than usual. Different months.

6. Erysipelas had unusually large prevalence during September and October.

7. No diseases attended with unusual fatality.

8. The sanitary surroundings of the cases of the following diseases did not seem to promote their occurrence: Namely Diphtheria, Typhoid Fever and Scarlet Fever.

9. Some advance in public sentiment and in views of individuals is observable in my circuit in regard to the importance of sanitary surroundings, and in means of preventing diseases. The city and town health officers have shown commendable activity, and are sustained by the better class of citizens.

10. Effective isolation and disinfection in cases of infectious and contagious diseases are practiced in this circuit.

GEO. R. FISHER, M. D.

1. SITUATE and parts of adjoining towns.

2. There has been an increase of at least 10 per cent. in amount of sickness for the year closed. This increase was due to the re occurrence of La Grippe in May. It seemed to have gained in violence and selected victims already weakened by disease. Two or three deaths were indirectly attributed to it.

3. The following zymotic diseases have prevailed during the past year:

Cholera Infantum. Sporadic. Average severity. August, Richmond.

Croup. Sporadic. Severe. May. Chopmist.

Diarrhœa and Dysentery. Sporadic. Average to severe. Autumn. Scituate.

Diphtheria. Sporadic. Average. Spring. Ponagansett.

Fever, Malarial. Sporadic. Mild. Summer. Chopmist.

Fever, Typhoid. None.

Influenza. Russian La Grippe epidemic. Average severity. May. In a large circuit.

Measles. None.

Scarlatina. None.

Whooping Cough. Epidemic. Average. Summer. Rockland.

4. No other zymotic disease epidemic.

Various illnesses from accidents. A large number. Fall and winter mostly.

5. Other diseases.

Brain, Inflammation and Congestion of. Average number. Winter months.

Bronchitis, Acute. Average prevalence. Fall and spring most prevalent.

Pneumonia. Average prevalence. Winter months.

Rheumatism. Some cases. Winter months.

Stomach, Acute diseases of. Average number. All seasons.

6. No other disease had unusually large prevalence, although there was a marked increase in amount of Dysentery.

7. None attended with unusual fatality.

8. The sanitary surroundings of some of the cases of Diphtheria were bad.

9. In the views of the mass, there is an advance towards sanitary improvement. The power of the press. The Monthly Bulletin of the State Board of Health. Education in general.

10. Effective isolation and disinfection in cases of infectious and contagious diseases are practiced in my circuit.

BARNARD ARNOLD, M. D.

1. WOONSOCKET.

2. The general amount of sickness in this circuit during the past year was about an average of previous years.

3. The following zymotic diseases have prevailed.

Cholera Infantum. Sporadic. Mild. June, July and August.

Croup. Sporadic. Mild. March, April and November.

Diarrhœa and Dysentery. Sporadic. Mild. June, July and August.

Diphtheria. Sporadic. Mild. April and November and December.

Fever, Malarial. Sporadic. Mild. October.

Fever, Typhoid. Sporadic. Mild. November and December.

Influenza. Epidemic. Mild. December.

Measles. Sporadic. Mild. June and October.

Scarlatina. None.

Whooping Cough. Sporadic. Mild. June.

4. No other zymotic disease epidemic.

5. Of other diseases.

Brain, Inflammation and Congestion of. Few cases. Any month during the year.

Bronchitis, Acute. Many cases. During spring, winter and fall.

Pneumonia. Few cases. December.

Rheumatism. Few cases. April, November and December.

Stomach, Acute diseases of. None particularly noticeable.

6. No other diseases had unusually large prevalence.

7. No diseases were attended with unusual fatality except Cholera Infantum.

8. The sanitary surroundings of the cases of Diphtheria and Typhoid Fever were such as might promote their occurrence.

9. There is some advance in public sentiment and in views of individuals in regard to the importance of sanitary surroundings. Sewerage establishment in town earnestly demanded and other sanitary measures called for.

10. Generally effective isolation and disinfection in cases of infectious and contagious diseases are practiced in this city.

JOSEPH C. MARANDA, M. D.

1. WOONSOCKET.

2. Including sickness of all kinds the general amount has been, during the past year, about the same as in previous years, until the occurrence of the Influenza epidemic, beginning the latter part of November.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Small amount.

Croup. Sporadic. Mild. November and December.

Diarrhœa and Dysentery. Small amount. Usual season.

Fever, Malarial. Sporadic. Mild. Fall months.

Fever, Typhoid. Sporadic. Mild. Fall months.

Influenza. Epidemic. Mild. December.

Measles. Epidemic. Mild. Fall months.

Whooping Cough. Epidemic. Mild. Fall months.

4. No other zymotic diseases epidemic.

5. Of other diseases. Independent of Influenza Sequelæ, about an average.

Brain, Inflammation and Congestion of. Small amount.

Bronchitis, Acute. Average amount. Cool months.

Pneumonia. Average amount. Cool months.

Rheumatism. Average amount. All the year.

Stomach, Acute diseases of. Average amount. All the year.

6. No other diseases had unusually large prevalence during the year.

7. No unusual fatality.

8. No evidence that the sanitary surroundings of the cases of Typhoid Fever were such as to promote their occurrence.

9. There is a decided advance in public sentiment in regard to the importance of sanitary surroundings, as shown by a growing demand for a sewerage system and other improvements.

10. Effective isolation and disinfection in cases of infectious and contagious diseases are fairly well carried out.

MARY T. FARNUM, M. D.

WASHINGTON COUNTY.

1. CHARLESTOWN AND RICHMOND.

2. Including sickness of all kinds the general amount has been 25 per cent. more in my circuit during the past year than the average of previous years.

3. Zymotic diseases have prevailed in my circuit during the year as follows.
Cholera Infantum. Not prevalent.

Croup. Not prevalent.

Diarrhoea and Dysentery. Sporadic. Average severity. July and August. Carolina.

Diphtheria. A few sporadic cases of average severity. Throughout the year.

Fever, Typhoid. Sporadic. Average severity. June, October and November. Carolina.

Influenza. Epidemic. Severe. November and December. General.

Measles. Not prevalent.

Scarlatina. Not prevalent.

Whooping Cough. None.

4. No other zymotic disease epidemic.

5. Of other diseases.

Bronchitis, Acute. Large prevalence. November and December.

Pneumonia. Large prevalence. November and December.

Rheumatism. Very small amount.

Stomach, Acute diseases of. None uncomplicated.

6. No other diseases had unusually large prevalence.

7. No diseases attended with unusual fatality.

8. The surroundings of the cases of Diphtheria and Typhoid Fever were not such as to promote their occurrence.

9. Do not observe any advance in public sentiment or views of individuals in my circuit in regard to the importance of sanitary surroundings, or increased interest in means of preventing diseases.

10. Effective isolation and disinfection in cases of infectious and contagious diseases are practiced in my circuit.

A. A. SAUNDERS, M. D.

1. HOPE VALLEY, HOPKINTON, AND RICHMOND.

2. Including sickness of all kinds the general amount was rather more in this circuit during the past year than the average of previous years.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. None.

Croup. A few cases. Fatal. March.

Diarrhoea and Dysentery. Large amount. Average severity. September.

Diphtheria. A few cases. Severe. January.

Fever, Malarial. Some sporadic cases throughout the year.

Fever, Typhoid. A few cases. Mild. June, July, August and December.

Influenza. Sporadic. March and April. Epidemic in December.

Measles. None.

Scarlatina. Four cases. Imported from New York City. One death. All had acute Bright's disease.

Whooping Cough. None.

4. No other zymotic disease epidemic.

5. Other diseases.

Brain, Inflammation and Congestion of. One case. Severe. October.

Bronchitis, Acute. A large amount in March extending into May. Severe form.

Pneumonia. Most prevalent in December.

Rheumatism. The usual amount of chronic. Most prevalent in February and March.

Stomach, Acute diseases of. August and September furnished quite a large number of cases.

6. No other disease had unusually large prevalence during the past year except sub-acute Rheumatism.

7. None attended with unusual fatality.

8. The sanitary surroundings of none of the cases of the following diseases were such as to promote their occurrence. Viz.: Diphtheria, Typhoid Fever and Scarlet Fever.

9. As to any advance in public sentiment or views of individuals, in this circuit, in regard to the importance of sanitary surroundings, or increased interest in means of preventing diseases, I think the people are becoming more awake to the importance of sanitary measures being enforced. The State Board of Health and Monthly Bulletin are educating them.

ELISHA P. CLARKE, M. D.

1. NORTH KINGSTOWN.

2. Including sickness of all kinds the general amount has been rather more in my circuit during the past year than the average of previous years.

3. Zymotic diseases have prevailed during the year as follows.

Cholera Infantum. Sporadic. Average severity. August and September.

Croup. Sporadic. Mild. Cool season. No particular locality.

Diarrhœa and Dysentery. Sporadic. Average severity. July, August and December.

Diphtheria. None.

Fever, Malarial. I have had three cases only, two from the vicinity of Providence and one from the west. All yielded to a fortnight treatment.

Fever, Typhoid. None.

Influenza. Prevalent thorough December. Of an average type. Fatal only to senile debility.

Measles. None.

Scarlatina. None.

Whooping Cough. None.

4. No zymotic diseases epidemic.

5. Other diseases.

Bronchitis, Acute. Large prevalence. March and December. The latter with La Grippe.

Pneumonia. Mild. Cool weather.

Rheumatism. Average number. Different months.

Stomach, Acute diseases of. None uncomplicated.

6. Catarrhal troubles have had unusually large prevalence during the year.

7. No diseases attended with unusual fatality.

9. No obvious advance in public sentiment as to the importance of sanitary surroundings.

C. E. MARYOTT, M. D.

1. WICKFORD AND TOWN OF NORTH KINGSTOWN.

2. Including sickness of all kinds the general amount during the past year was about the average of previous years until December.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Average severity. August and September. Scattered.

Croup. Sporadic. Mild. Spring. Scattered.

Diarrhœa and Dysentery. Sporadic. Average severity. August and September. Scattered.

Diphtheria. None.

Fever, Malarial. None.

Fever, Typhoid. Only one case, and that in village of Wickford.

Influenza. In latter part of November and December epidemic.

Measles. A few cases of Rotheln.

Whooping Cough. None.

Scarlatina. One case only. Saunderstown.

4. Other zymotic diseases. Chicken Pox.

5. Other diseases. In spring of 1891 Impetigo Contagiosa was very prevalent, especially in village of Hamilton.

Brain, Inflammation and Congestion of. One case only. November.

Bronchitis, Acute. Epidemic with Influenza. Cool season.

Pneumonia. Very few cases. Cool season.

Rheumatism. Average amount. October, November and December.

Stomach, Acute diseases of. Average number. In summer.

6. No other diseases had unusually large prevalence during the past year.

7. None attended with unusual fatality.

8. Typhoid Fever. Only one case. In a locality favorable for its promotion.

9. As to public sentiment, or views of individuals, in this circuit in regard to the importance of sanitary surroundings, or interest in means of preventing diseases, I see no advance. No decided views on drainage, or isolation from infectious or contagious diseases.

10. Isolation and disinfection in cases of infectious and contagious diseases are practiced only when recommended by the physicians.

In a certain locality in the village of Wickford, during the writers three years practice in the town, 2 per cent. out of a total of 250 have had the Typhoid Fever. Sanitary conditions bad; wells, cesspools and privies all huddled together. In the present epidemic of Influenza, prostration seems to be greater than in the former epidemics. The writer has had a number of cases of Jaundice in children with "La Grippe."

HAROLD METCALF, M. D.

1. SOUTH KINGSTOWN.

2. Including sickness of all kinds the general amount has been more in this circuit during the past year than the average of previous years.

3. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Usual type.

Croup. Ordinary severity. Winter.

Diarrhœa and Dysentery. Average amount. Ordinary severity. Warm season.

Diphtheria. Small amount. Mild. No particular months.

Fever, Malarial. Sporadic. Many. Different months.

Fever, Typhoid. Sporadic. Usual type. Fall months.

Influenza. Epidemic. Of La Grippe. Severe. December.

Measles. German Measles. Mild. Considerable number.

Scarlatina. Few cases. Scattered.

4. No other zymotic diseases epidemic.

5. Other diseases.

Brain, Inflammation and Congestion of. Average.

Bronchitis, Acute. Large amount with La Grippe. Spring and December.

Pneumonia. Large prevalence following La Grippe.

Rheumatism. Average amount. All seasons.

Stomach, Acute diseases of. A few severe cases Gastric Fever or Gastritis following La Grippe.

6. Of other diseases. Considerable heart derangement and nervous disturbance following La Grippe.

7. No diseases attended with unusual fatality.

8. Do not suppose the sanitary surroundings of any of the cases of the diseases were such as to promote their occurrence.

9. Nothing new in regard to public sentiment or views of individuals in regard to the importance of sanitary surroundings.

JOHN E. PERRY, M. D.

1. WESTERLY.

2. Including sickness of all kinds the general amount in this circuit during the past year has been about an average of previous years.

3. Zymotic diseases have prevailed during the year as follows.

Cholera Infantum. Sporadic. Average severity. Summer.

Croup. I have seen no cases of Membranous Croup during the year.

Diarrhœa and Dysentery. Sporadic. Average severity. Summer and winter.

Diphtheria. None.

Fever, Malarial. Frequent. Mild. Throughout the year.

Fever, Typhoid. More than the average. Average severity. Fall.

Influenza. Epidemic. Average severity. Close of year.

Measles. Have seen none during the year.

Scarlatina. Several cases but hardly epidemic. Average severity. July and October.

Whooping Cough. Sporadic. Average severity.

4. No other zymotic diseases epidemic.

5. Other diseases.

Brain, Inflammation and Congestion of. Small prevalence. No special season.

Bronchitis, Acute. Large prevalence. Winter and fall.

Pneumonia. Average prevalence. Winter and fall.

Rheumatism. Average prevalence. Different months.

Stomach, Acute diseases of. Average prevalence. Summer.

6. No other diseases had unusually large prevalence during the year.

7. No unusual fatality.

8. Typhoid Fever. Lack of attention to disinfection, drainage and water supply in some localities seemed to be such as to promote its occurrence.

9. As to any advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings, or means of preventing diseases, I think the recently introduced placarding of houses where Scarlatina exists is tending to advance such views.

10. In regard to isolation and disinfection in cases of infectious and contagious diseases, that is the aim, and in many cases it is quite effective.

J. HOWARD MORGAN, M. D.

TOWN SANITATION.

REPORTS FROM TOWNS.

IN RELATION TO SANITARY IMPROVEMENTS, ETC.

It has been previously observed, that a complete annual report of a State Board of Health properly includes an account of the measures taken each year by municipal authorities, corporations or individuals, for the promotion of the health of the communities under their respective supervision or control. In order, therefore, to ascertain the facts in relation to such measures, and for the purpose of presentation in this Report, as in the reports heretofore issued, and in the continuance of the design to keep well informed of all proceedings throughout the State, on the part of town or city councils, or any form of municipal authority, in the appointment of health officers or boards of health, and in the direction of improvements which have in view and seem to promise the promotion of public health ; by the abatement of nuisances ; or the removal of unsanitary conditions and surroundings ; or by the introduction of water for general use or construction of sewers ; or the establishment of other public works, which may not only be of great public utility and convenience, but also serve in some measure, large or small, in the prevention of disease, the Secretary has, as heretofore, solicited replies from the town and city clerks of the several towns and cities, or other municipal officers, in answer to questions proposed in a circular sent for that purpose.

It is designed and hoped that a connected history may thereby be secured of all sanitary improvements of a public character in all parts of the State, from year to year ; and the gradual awakening of the citizens of the different towns to the necessity of sanitary public measures shown ; and also whatever intelligent appreciation of such necessity and whatever public spirit in existence in the towns there may be, as manifested by the readiness with which needed sanitary measures are adopted.

The following is the form of circular sent at close of the year 1891.

CIRCULAR No. 130.

OFFICE OF SECRETARY STATE BOARD OF HEALTH,

48 WEYBOSSET STREET,

PROVIDENCE, R. I. Jan. 1, 1892.

To the Town Clerk:

It is, by statute law, made the duty of the Secretary of the State Board of Health to make inquiries of town or city clerks, or of the clerks of local boards of health, in regard to the general health and sanitary condition of the towns, and also in regard to measures taken for the improvement of the same.

The law reads as follows :

PUBLIC STATUTES, CHAPTER 83.

SEC. 6. The Secretary of the said Board shall make inquiry, from time to time, of the clerks of town and local boards of health, and practicing physicians, in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease, or causes of general ill-health, and also in relation to the proceedings of the said boards of health, in respect to acts for the promotion and the protection of the public health, and also in relation to diseases among domestic animals, in their several towns and localities, respectively, and the said clerks of town and local boards of health, and said practicing physicians, shall give such information, in reply to said inquiries, of such facts and circumstances as have come to their knowledge.

The Secretary therefore respectfully makes the following inquiries:

1. Has any work for the promotion of public health been contemplated or completed in your town by the town authorities, or by private enterprise, during the year? If any, please state what.
2. If by introduction or extension of water service for general use, please state what proportion of the population, by estimation, was supplied with the same at the end of the year.*
3. If by sewerage, state what the aggregate length of sewers, by estimation or otherwise, and about what proportion of the population had drainage connection with them at the end of the year.*

* If not known by the person replying, please state where or of whom such information may be obtained.

4. If by new ordinances in abatement of nuisances, or for any sanitary purpose, please send copy of same, also state how far, to your best knowledge, all the sanitary ordinances have been enforced. Copies of town ordinances especially desired.

5. Has your town any legal board of health beside the town council? If so, please give the names of the officers of the same.

6. Please give the names of the health officers of your town.

7. Has gratuitous vaccination been provided in your town during the past year? What proportion of the population was vaccinated, according to your best knowledge?

8. Have undertakers promptly sent in their returns of death? Please give names of any who do not. (See Public Statutes, Chap. 85, Sec. 1.)

Respectfully,

CHAS. H. FISHER,

Sec. State Board of Health.

N. B.—The town or other clerk should charge a remunerative fee for replying to the above circular, and present to the town council or board of health, it being a service required by law.

REPORTS FROM TOWN CLERKS.

In relation to municipal, corporate or private proceedings in regard to sanitary improvements, and other measures for the promotion of public health.

BRISTOL COUNTY.

BARRINGTON.

1. No particular work for the promotion of public health has been completed in this town by the town authorities during the year.
2. Do not know of any extension of water service for general use.
4. No new ordinances in abatement of nuisances, or for any sanitary purpose.
5. No legal board of health beside the town council.
6. No special health officers appointed.
7. Gratuitous vaccination has been provided in this town during the past year. The proportion of population vaccinated, not yet reported.
8. I think undertakers have promptly sent in their returns of death.

M. H. Wood, *Town Clerk.*

BRISTOL.

2. No change from last year in the extension of water service for general use.
3. About one thousand feet of sewers have been constructed the past year. about fifteen residences have entered the said sewers.
4. No new ordinances for any sanitary purposes. All ordinances for the abatement of nuisances have been enforced.
5. The town council, the legal board of health.
6. Health officer, Geo. H. Peck.
7. Gratuitous vaccination was provided in this town during the past year. About fifty were vaccinated.
8. Undertakers have complied promptly with the town ordinances relative to returns of deaths.

H. F. BENNETT, *Town Clerk.*

WARREN.

1. For the promotion of public health no special work has been done in this town by the town authorities, during the year,
2. The water service for general use, the same as last year.
3. No new sewers have been constructed. The proportion is the same as last year.
4. No new ordinances for sanitary purposes.
5. Legal board of health, the town council.
6. Health officer, M. B. Conroy.
7. No gratuitous vaccination has been provided during the year.
8. Undertakers have promptly sent in their returns of death.

C. B. MASON, *Town Clerk.*

KENT COUNTY.

COVENTRY.

1. Some work for the promotion of public health in this town by private enterprise, such as the better care of cesspools, privy vaults and sewerage around dwellings generally.
2. By the introduction and extension of water service for general use, the villages of Quidnick and Anthony fully and Washington partially supplied.
3. No public sewers have been constructed.
4. No new ordinances for any sanitary purpose.
5. No legal board of health beside the town council.
6. Health officers, John Winsor, M. D., Frank B. Smith, M. D., Warren E. Page, M. D., and Charles L. Ormsbee, M. D.
7. No gratuitous vaccination provided during the past year.
8. So far as resident undertakers are concerned they have promptly sent in their returns, perhaps outsiders have not. Cannot give names as I am not informed.

S. W. GRIFFIN, *Town Clerk.*

EAST GREENWICH.

1. Nothing new for the promotion of public health completed by the town authorities during the year.
2. No change in the extension of water service.
3. No sewers.
4. No new ordinances for any sanitary purpose.
5. No legal board of health beside the town council.

6. Health officer, E. G. Carpenter, M. D.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have promptly sent in their returns of death.

E. STANHOPE, *Town Clerk.*

WEST GREENWICH.

1. Nothing new for the promotion of public health completed in this town by the town authorities.
2. No water service for general use.
3. No public sewers.
4. No ordinances for any sanitary purpose.
5. No legal board of health beside the town council.
6. Health officers not appointed.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have promptly sent in their returns.

W. N. SWEET, *Town Clerk.*

WARWICK.

1. None.
2. Some extension of water service for general use, by the East Greenwich Water Supply Company, and Pawtuxet Valley Water Company.
3. No public sewers. Some increase of corporation and private sewers.
4. No new ordinances in abatement of nuisances, or for any sanitary purpose.
5. No legal board of health beside the town council.
6. Health officer, Albert G. Sprague, M. D.
7. Gratuitous vaccination has been provided in this town during the past year. Do not know the proportion of the population that was vaccinated. Dr. J. B. Hanaford, vaccinator.
8. Undertakers have promptly sent in their returns of death.

J. T. LOCKWOOD, *Town Clerk.*

NEWPORT COUNTY.

JAMESTOWN.

1. In reply to circular No. 130, I would say that this town has completed a public sewer, and extended the water works in this town. See also ordinance appended.
2. As near as I can estimate, I should think that three quarters of the population of the town are now supplied with water.

3. The aggregate length of sewers in this town is about two miles, and about one half of the population are connected with it.
4. The sanitary ordinances have been very well enforced.
5. No special board of health.
6. Abbot Chandler is health officer.
7. Gratuitous vaccination has not been provided in this town during the year.
8. All the undertakers have sent in their returns very promptly.

WM. F. CASWELL, *Town Clerk.*

The following was passed May 25th, 1891:

Voted and Resolved, That any person who shall dump or throw any refuse matter in the public highway shall be fined \$5 for the first offence and \$10 for the second

The following was passed July 27th, 1891:

It is ordered by the town council of Jamestown, that the dumping ground for the present shall be within the lines indicated by the four stakes near the middle of the town beach on the north side of the road. Nothing shall be dumped there that will create a nuisance. All persons dumping shall bury all matter, such as cans, bottles, papers, or other things that disfigure said beach. Any person who shall violate any of the above provisions shall be fined not less than \$2 and not more than \$10. The Commissioner of the beach is hereby empowered to enforce the provisions of this act, and to post the above in two places on the beach.

NOTICE TO THE CITY OF NEWPORT.

JAMESTOWN, July 28th, 1891.

Town Clerk's Office of the Town of Jamestown.

At a regular meeting of the Town Council, held July 27th, 1891, the following protest was passed:

The town of Jamestown does hereby protest against the city of Newport dumping their swill at sea, as it creates a nuisance to this town, and I was instructed to send the above to you.

Yours Respectfully,

WM. F. CASWELL, *Town Clerk.*

LITTLE COMPTON.

1. Nothing new for the promotion of public health by the town authorities.
2. No water service for general use.
3. No public sewers, only on private property, and frequently drained into the highways.

4. No attention paid to sanitary measures.
5. No board of health beside the town council.
6. No health officer appointed.
7. Gratuitous vaccination has not been provided in this town during the past year. I think none for several years.
8. Undertakers have promptly sent in their returns of death, with only exceptions in one or two instances.

F. R. BROWNELL, *Town Clerk.*

MIDDLETOWN.

1. As to proceedings for the promotion of public health by the town, no work of the character described in the preceding question was undertaken in Middletown during the year 1891.

2. No water service introduced except that the Newport Water Works granted some water privileges to some builders on Easton's Point.

3. No public sewers.

4. Two ordinances were adopted, copies of which are herewith sent. The ordinances more especially designed to improve the sanitary condition of Middletown have been enforced and generally observed.

5. No legal board of health, beside the town council.

6. John Peckham is health officer, and is indefatigable in efforts to guard the public health of Middletown from every adverse influence.

7. Gratuitous vaccination was provided by the town council in December, 1890, and January, 1891. Dr Henry E. Turner, who did the work, reported to the town clerk, fifty-six vaccinations and ninety certificates as given out.

8. Undertakers have promptly sent in their returns of death for the most part.

A. L. CHASE, *Town Clerk.*

AN ORDINANCE RESTRICTING THE REMOVAL OF THE CONTENTS OF PRIVY VAULTS, CESSPOOLS, &C.

[Passed May 18, 1891.]

It is ordained by the Town Council of the town of Middletown, as follows, to wit:

SECTION 1. No person hereafter shall bring into the town of Middletown, or spread upon the land therein, the contents of any privy vault or cesspool, or the residual matter from any soap factory, at any time after the last day of April or before the first day of November in any calendar year.

SEC. 2. Any person violating the provisions of the first section of this ordinance shall be fined twenty dollars, to be recovered by complaint and warrant, before any court of competent jurisdiction, to the use of said town.

SEC. 3. It shall be the duty of the Health Officer of this town, at the proper expense thereof, to complain of and prosecute to final judgment all violations of this ordinance.

SEC. 4. Nothing in this ordinance contained shall be so construed as to forbid or prevent any inhabitant of this town from removing the contents of and cleansing his own privy vault or cesspool as occasion may require.

SEC. 5. This ordinance shall take effect immediately.

A true copy : Attest,

A. L. CHASE, *Council Clerk.*

AN ORDINANCE PROHIBITING THE BRINGING OF THE CARCASSES OF DEAD BEASTS
INTO THE TOWN OF MIDDLETOWN.

[Passed December 21, 1891.]

It is ordained by the Town Council of the Town of Middletown, as follows, to wit:

SECTION 1. No person hereafter shall bring, or suffer to be brought into the Town of Middletown, the carcass of any dead horse or other dumb animal, for the purpose of burying or depositing the same therein.

SEC. 2. Any person violating the provisions of the first section of this ordinance shall be fined twenty dollars, to be recovered by complaint and warrant, before any court of competent jurisdiction, to the use of said town.

SEC. 3. It shall be the duty of the Health Officer of this town, at the proper expense thereof, to complain of and prosecute to final judgment all violations of this ordinance.

SEC. 4. Nothing in this ordinance contained shall be so construed as to forbid or prevent any inhabitant of this town from bringing into and burying in this town, the carcass of any beast to him belonging, when in full health and life, which may accidentally die without the municipal limits thereof.

SEC. 5. This ordinance shall take effect January 1, 1892.

A true copy: Attest,

A. L. CHASE, *Council Clerk.*

NEW SPORHAM.

1. Some work for the promotion of public health has been contemplated by the town authorities, and much more by private enterprise, during the year.

2. No public water service.

3. No public sewers.

4. No new ordinances for any sanitary purpose.

5. The board of health, the town council.

6. Health officer, Thaddeus A. Ball.

7. (No reply.)

8. Undertakers have promptly sent in their returns of death.

A. N. ROSE, *Town Clerk.*

FOURTSMOUTH.

1. Nothing new for the promotion of public health contemplated by the town authorities during the year.

2. No water works.
3. We have no public sewers.
4. No new ordinances in abatement of nuisances, or for any sanitary purpose.
5. No legal board of health beside the town council.
6. Special health officers not appointed.
7. Gratuitous vaccination has not been provided during the past year.
8. Undertakers as a general thing have promptly sent in returns of death.

P. B. CHASE, *Town Clerk.*

TIVERTON.

1. No particular work for the promotion of public health contemplated or completed by the town authorities during the year.
2. No introduction or extension of water service for general use.
3. No public sewers.
4. Nothing new for any sanitary purpose.
5. Regular board of health, the town council.
6. Health officers, N. B. Church, S. E. Borden, D. W. Simmons, A. Walker and F. A. Wilcox.
7. No gratuitous vaccination provided during the past year. Most of the inhabitants, except very small children, have probably been vaccinated at some time during their lives. We have no resident physician.
8. I have no fault to find with any undertaker.

J. T. COOK, *Town Clerk.*

NEWPORT CITY.

1. A very considerable amount of work, having directly or indirectly the promotion of the public health, has been accomplished in this city during 1891.
2. The water service has been somewhat extended, although the quality of the water has been severely criticised, and the purpose of the Water Works Corporation in regard to the improvement of the quality of the water has been a subject of much controversy and not a little uncertainty.
3. The extension of the public sewers has been quite actively prosecuted, and the private connections increased.
4. The sanitary ordinances have been quite fairly enforced.
5. Newport has a special board of health. C. F. Barker, M. D., president ; F. H. Rankin, M. D., secretary ; C. W. Corbett, executive officer.

THE FOLLOWING EXTRACTS FROM THE INAUGURAL ADDRESS OF HON. SAMUEL R. HONEY, MAYOR, JAN. 4, 1892, ARE PERTINENT IN THIS CONNECTION.

Public Health.

Newport ought not to be satisfied with being merely a healthy city. We should aim to be the healthiest city in America. We have everything that nature

can do for us in this regard, and it only remains for us to supplement her work by bringing science to her aid. For the statistics of the health of the city during the past year you are respectfully referred to the report of the Board of Health, from which you will see that there is room for improvement. How much of the defects which exist is due to the impurity of our water supply cannot be estimated until after the report of Professor Drown of Cambridge University shall have been laid before you. That gentleman was employed by the predecessors of the present Board of Aldermen (sitting as a Board of Health) to make an examination of this question; the examination is, I hear, rapidly approaching completion.

The city's house offal, in my opinion, ought to be disposed of by cremation; I do not understand that the experiments with the cremator on the city wharf were of so unsatisfactory a character as to justify its abandonment. It would seem that some effort ought to be made to bring about a settlement of the suit which is pending against the city for the recovery of the price of it, by arranging, if possible, some sort of a compromise which shall be based upon its improvement to the point of efficiency. We ought resolutely to set our faces against the defilment of our shores by sewage, liquid house offal or other nuisance, for our coast is a portion of the stock in trade, on the purity of which we have to rely for our support.

With the completion of our sewerage system, improved methods of cleaning the public streets, proper disposition of house offal, and night soil, and above all the application of scientific methods for the improvement of the quality of our water supply, it ought to be easy for Newport to place herself in the position in respect to health which I have suggested; and if in accomplishing needed reforms the assistance of the auxiliary Board of Health be needed, I urgently recommend you to confer upon it such further and additional powers as it is willing to assume from time to time, and which the law permits you to transfer to it.

Streets and Sewers.

We have good reason to be proud of our streets and public highways; few cities of the size of ours, anywhere in the world, can rival us in our mileage of roadways or in the thoroughness of construction. Still something can be done not only to improve construction but also care and maintenance, having regard to health and comfort.

In my judgment our principal thoroughfares ought to be carefully swept during the night and well watered early in the morning. It is a barbarous practice to permit the raising of a great cloud of dust on Thames street or Bellevue avenue (for instance) by employees of the city during the time those streets are in use for business or pleasure.

I am inclined to think that it would be an improvement to pave Bellevue avenue between the Jews' Cemetery and the Ocean House with asphalt blocks, so as to permit its being thoroughly washed and thus freed from the accumulation of dirt there which arises from the large traffic of the summer months.

* * * * *

Our sewerage system ought to be completed at as early a date as the local

supply of labor will permit. Large sums of money have been expended (and all our citizens taxed therefor) in the construction of the main sewer and its outlet ; justice can be done now only by extending lateral and connecting sewers wherever they are needed.

* * * * *

A great deal has been said of late about widening Thames street ; if that thoroughfare is to retain its position as the principal business street of the city, the owners of the property abutting on it will have to do something in this direction. Whenever they present a feasible plan to the City Council, you will no doubt be glad to co-operate with them in carrying it into effect.

Now that the inner cove basin has been filled in, it is to be hoped that a similar work will be undertaken for the outer basin, so that, not far in the future, the railway station may be removed to the land recently made on the cove basin, and Marlborough street extended through to Washington, thus affording better facilities to the passengers of the Fall River line on arriving at and departing from the city, and opening up a route for the extension of the street railway through Third street to Coddington Point.

It is unfortunate that the city has given up the right to lay water pipes in its streets ; otherwise it would be open to us to make use of salt water for the purposes of sprinkling. I believe it to be beneficial from more than one standpoint. It serves as a deodorizer, keeps the dust down longer and relieves the roadbed from a portion of the direct friction of wheels and the wear and tear resulting therefrom. Perhaps a return to it may some day be possible. In the meantime while we are obliged to pay so highly as we do for fresh water, we ought to use it freely, and the sprinkling of our streets ought to begin early in the spring and end late in the autumn, just as long as flying dust is a source of discomfort and injury to health.

* * * * *

Water.

If one were called upon to name the necessary of life which is second only to the air we breathe, the word "water" would involuntarily rise to his lips. Its use confronts us from the moment we rise in the morning until we retire at night. Health and comfort require its free use before we leave our bedrooms ; breakfast would be impossible without it. Passing through the streets to our daily work in the summer months it is essential to health to have that freedom from dust upon the road and bad odors from the sewers which a liberal use of water alone can give. The barber, the baker, the bricklayer, the laundress, the cook, are alike at the mercy of those who control the supply.

It is difficult to conceive of a subject upon which municipal control ought more properly be brought to bear under the rule which I have suggested than that of water supply, for does it not directly affect every man, woman and child in the community ? Is any citizen more incommoded by poor streets and extravagant tax rates to maintain them, than he is by impure water and high prices for it ? The poor are especially the victims of bad administration and extortionate charges, for the rich can escape both, by the construction of cisterns in which to store rain and by resorting to artificial methods of purification, for which the poor have neither the time nor the facility.

Newport is at present supplied with this great necessity of life by a company called the Newport Water Works, the control of which is in the hands of a very small group of men (possibly of only one man). In the year 1876 the then City Council, acting pursuant to a law which had been passed only a few weeks before, granted to one of our fellow-citizens the exclusive right for fifty years to use our streets for the laying and maintaining therein of pipes to convey water, and also for the same period of time exempted the pipes and the works connected therewith from taxation. It also conveyed to him all the title which the city had in and to Easton's pond and marsh, presumably that he might draw therefrom the water which he intended to supply to the people.

The tendency in this country has been steadily towards municipal rather than private control of the water supply. All of the cities of Rhode Island excepting Newport own their own works. There are about 160 cities in the United States of over 20,000 population which have water works, and of these only 59 are under private control. According to statistics gathered by the Census Bureau, out of 273 cities with a total population of 15,240,504, fifty-six per cent. of the cities and seventy-seven per cent. of the population own their own works.

A bill ought to be prepared and presented to the General Assembly giving to the City Council the regulation of the prices of the company and extending the powers of the Board of Aldermen (sitting as a Board of Health) so as to include a supervision over the watershed and the quality of the water, unless indeed, its powers be sufficient already.

The following observations from different sources, are pertinent in regard to some of the peculiar circumstances and conditions of life in Newport city, civil, social and sanitary:

"Newport is a community somewhat peculiarly placed with regard to its internal management. This is largely owing to the great inequality between the demands of the summer and winter season. It has become the favorite resort of many persons from other places during the critical months of the year, and those in which the public health is most exposed to danger. Those who come here and throng its hotels, hire its cottages, or build their own, come in general from places where the questions of a pure water supply, good air, proper sewerage, etc., have received, or are constantly seeking more and more eagerly, the best services of sanitary science. They are eager to obtain all the aid which they can from any source in the solution of those difficult and vital problems. They desire the same wholesome surroundings in this beautiful spot which they have chosen for their summer homes. These summer visitors do not come and depart as the swallows; but they leave a permanent and deep impress on the city and on its inhabitants. They bring many advantages, but also many responsibilities, and the one cannot be ignored without risking loss of the other. The advantages are increased business, increased taxable property, much money left among the traders, hotels, lodging house and cottage owners; far better general facilities by rail, boat, express, and in all ways for the conduct of life, than would ever reach a place of the size and position of Newport otherwise. A larger field is opened by them for association and comparison in the activities and enjoyments of life. The city is not only larger for a time while the summer visitors are here, but is made permanently larger in many ways, and it requires larger ideas in its permanent care and management than it otherwise would.

The city government of Newport, which with a moderate tax levy and its especially favorable topography might quite suffice for the proper care of the community at its winter size and its former more compact area, is naturally not so well able to meet the enlarged demands which this summer influx makes and leaves behind. With the best intentions it finds itself hampered in many ways, and unable to do what it gladly would. Most cities have a gradual growth, and their powers grow with the gradual demand on them. But Newport has had an abnormal and quite peculiar growth, and it has been not gradual but sudden. Within a few brief years all the great problems which surround the best and most economical care of the public health, the public order, the public attractiveness, its good roads, its proper lighting and policing, its modes of quick transit, have in more or less extent, and more or less urgency, been brought before the government of what was once a quiet, little, well ordered, tranquil city on an island, but which cannot hope to ever be just the same again. No wonder many things are left undone, or imperfectly done, which everyone would be glad to have done, and done at once.

It was to aid the city authorities and the people of Newport in this work, and not to 'stir up strife,' that this society* was formed. It has always worked with this wish and with this end in view. Men of high standing in science, professional men, men of leisure and men of many different pursuits, have given their best and their gratuitous services.

What are the things that enable a man to understand anything or any person if not intelligence, patience, familiarity, kind feeling, a large education and a wide experience of men and things? It seems to me that there is a good supply of all these in this society's membership.

If voters and taxpayers are 'outsiders,' I suppose that the members of this society are such. But who, then, is a native, or an insider, or a citizen, or a domiciled inhabitant? And it is in the interest of voters and taxpayers and by such that this society 'is run'—what it does in the way of discovering and remedying the danger to which the public health is exposed is not light or agreeable work, and its cost is paid out of the members' pockets. It helps to purify homes, to save infantile life, to ward off the diseases which find their most numerous victims among the poor, helpless and ignorant. It knows no rich, no poor, no summer visitor, no townsman as such; but all as residents of Newport, exposed to dangers and evils which can be averted, and which it tries its best to avert."

"The Newport Sanitary Protection Association is just what its name indicates, that only and nothing else. It has not been a political organization, is not now and does not intend to be; it has no politics and does not propose to have. That its action should be above political strife, and without relation to the success of a political party, is vital to its continuance as an agency for good in the path of public service and usefulness, for which it was chartered by the State of Rhode Island and to which, by its charter, it is limited.

This underlying fact is known and fully recognized by its members, who are of all parties, but whose individual party affiliations are of no concern to the association, and have in it no recognition."

* Sanitary Protection Association.

PROVIDENCE COUNTY.

BURRILLVILLE.

1. No unusual work for the promotion of public health by the town authorities during the year.
2. The introduction of water for general use has not yet been accomplished.
3. No public sewers.
4. Sink drains, cesspools, etc., etc., have been attended to by health officer.
5. Legal board of health, the town council.
6. Health officer, Peter McDermott, Harrisville.
7. Gratuitous vaccination not provided during the past year.
8. Undertakers fairly promptly sent in their returns of death.

ALVAH MOWRY, *Town Clerk.*

CRANSTON.

1. No particular work for the promotion of public health in this town by the town authorities during the year.
2. Some extension of service by Board of Public Works, Providence, and Pawtuxet Valley Water Company.
3. No public sewers.
4. No new ordinances for any sanitary purpose.
5. Board of health, the town council.
6. Health officers: Fred. W. Bradbury, M. D., Superintendent; John Bigbee, Town Sergeant, Cranston Print Works.
7. Gratuitous vaccination has been provided in this town during the past year.
8. Undertakers have promptly sent in their returns of death except E. R. Osgood, Providence.

D. D. WATERMAN, *Town Clerk.*

CUMBERLAND.

1. Action has been taken for the promotion of public health in this town by the town authorities during the year.
2. There has been considerable extension of water service for general use.
4. No new ordinances in abatement of nuisances. Old ordinances enforced.
5. Board of health, the town council.
6. Health officer, Dr. Thomas J. Smith.
7. Gratuitous vaccination was provided in this town in 1890. About 1,000 vaccinated.
8. Undertakers have promptly sent in their returns of death.

PATRICK F. KINION, *Town Clerk.*

EAST PROVIDENCE.

1. Various projects for the promotion of public health have been contemplated by the town authorities during the year. A sewer has been put into Sutton street, and a short distance on Fountain avenue.

2. A quite large extension of water service for general use.

3. Extension of sewers, about 1000 feet; about ten or twelve new families connected.

4. All sanitary ordinances have been enforced by the health officer.

5. Board of health, town council.

6. Health officer, Mason B. Wood.

7. Gratuitous vaccination has been provided during the past year. About three hundred children.

8. Undertakers promptly send in their returns of death as a rule, some are very prompt, others are quite slow.

G. F. HUNTER, *Town Clerk.*

FOSTER.

1. Nothing new for the promotion of public health, by the town authorities during the year.

2. No public water service.

3. No public sewers.

4. Sanitary ordinances have been enforced.

5. Board of health, the town council.

6. Health officer, Henry Arnold, M. D.

8. Undertakers are fairly prompt in making their returns of death.

E. D. LYON, *Town Clerk*

GLOUCESTER.

1. No work for the promotion of public health contemplated by the town authorities.

2. No public water service.

4. No new ordinances for any sanitary purpose.

5. Board of health, the town council.

6. Health officer, Job Owen, Chepachet.

7. Gratuitous vaccination has been provided during the past year. I do not know the number; the doctors have not sent in their returns.

8. Undertakers promptly send in their returns of death.

C. W. FARNUM, *Town Clerk.*

LINCOLN.

1. Considerable work for the promotion of public health has been contemplated by the town authorities during the year.
2. Considerable extension of water service for general use in the compact part of the town. See report of Pawtucket Water Commissioners.
3. Some extension of sewers.
4. All ordinances newly collated and revised. See sanitary ordinances appended.
5. Board of health, the town council.
6. Health officer, Dr. Napoleon Malo.
7. Gratuitous vaccination was provided in this town during the past year. I cannot state what proportion of the population; all who applied were vaccinated.
8. Undertakers have quite promptly sent in their returns of death except Arseve Therien of Manville.

C. FRED CRAWFORD, *Town Clerk.*

SANITARY ORDINANCES OF THE TOWN.

CHAPTER I.—ANIMALS.

It is ordained by the Town Council of the Town of Lincoln as follows :

SECTION 1. No horses, sheep, swine, goats or cattle shall go at large, loose or unfastened, in any street or highway within the limits of the compact part of the town; and every owner of any such animal found at large within said limits, shall pay a fine not less than two nor more than twenty dollars.

SEC. 2. Every person residing or being in this town, who shall have any horse, ox, mule, cow, bull, sheep, dog or other animal die in said town, shall bury or cause the same to be buried within twenty-four hours after the death of such animal, so that every part of said animal shall be at least three feet below the surface of the ground where such animal shall be buried.

SEC. 3. No person shall bring or cause to be brought into the town the dead body of either of the aforementioned, or of any other animals, and leave or cause the same to be left within this town, unless the same and every part and portion thereof shall be buried at least three feet below the natural surface of the ground where such animal shall be buried, and in conformity with the requirements of the health officer.

SEC. 4. No person shall keep or suffer to be kept any swine within one hundred feet of any dwelling house in the compact part of said town: *Provided*, however, that swine may be kept under any barn, shed or out-building where the health officer shall deem it suitable and fit for that purpose.

SEC. 5. Every person violating any of the provisions of sections 2, 3 and 4 of this ordinance shall pay a fine of not less than five nor more than twenty dollars.

CHAPTER XVIII.—PUBLIC HEALTH.

It is ordained by the Town Council of the Town of Lincoln as follows :

SECTION 1. The town council may grant licenses to persons to remove the contents of privy vaults, sink drains and cesspools, and may make regulations, as to the time and manner of such removals, and may at any time revoke such licenses or any of them.

SEC. 2. No person shall engage in the business of removing the contents of any privy vault, sink drain or cesspool, without being duly licensed by the town council to do so; and every person violating any provision of this section shall be fined ten dollars.

SEC. 3. The town council shall annually appoint in the month of June, a health officer whose duty it shall be to faithfully enforce all laws of the State and the ordinances of the town, relating to the public health; he shall perform all such other duties as may be from time to time required of him by the town council, and shall receive such compensation in full for his services as may be fixed by the town council.

SEC. 4. The health officer shall carefully and promptly examine into, and where necessary shall report to the town council concerning the state and condition of every place within, or part of the town, where he shall be credibly informed or shall have reasonable cause to suspect that there exists any matter or thing which is, or is likely to become, injurious to the health of the inhabitants of the town.

SEC. 5. Every person who shall throw or deposit, or cause to be thrown or deposited, in or upon any street, highway, gangway or public place in this town, any filthy water or other liquid which causes any noxious or unhealthy effluvia, or who shall cause or suffer such filthy water or other liquid to collect on his premises, or upon premises occupied by him, so as to be prejudicial to health, or who shall cause or suffer the same to flow into or upon any street, highway, gangway or public place in this town, and not remedying the same within twenty-four hours after notice from the health officer, and every person who shall remove or in any way carry the contents of any sink, cesspool or privy in or through any street or highway of said town, between the first day of May and the first day of November in each year, after the time of daylight in the morning, or before nine o'clock in the evening except by permission of the health officer, or at any time remove or carry the contents of any sink, cesspool, or privy in any vessel whatever, unless said vessel is so constructed as not to scatter or leak the contents, shall be fined not less than five nor more than twenty dollars for each offence.

SEC. 6. Whenever, in the opinion of the health officer, the use of any well or cistern is dangerous to health, the use of such well or cistern shall be discontinued, and such shall have a suitable stone or iron cover cemented down.

SEC. 7. No owner, occupant, agent or person, having charge of any land in the town, shall connect any cesspool, privy vault, sink drain or house drain with any well therein, nor permit or suffer the contents of any cesspool, privy vault, sink drain or house drain, or any filthy substance whatever, to flow into or to be deposited in any such well, whether the use of the well shall have been

discontinued or not. Every person violating any of the provisions of this section shall be fined not less than five nor more than twenty dollars.

SEC. 8. The health officer is hereby authorized to make in behalf of the town such contract or contracts as he may deem the interest of the town to require, relating to the removal of swill, night soil, the contents of vaults, drains and cesspools, and of any other matter or thing, which is, or is likely to become, injurious to the health of the inhabitants of the town.

For comprehensive ordinance in relation to sewers, see newly published "Charter and Ordinances of the Town of Lincoln."

JOHNSTON.

1. No particular work for the promotion of public health, by the town authorities, other than free vaccination.

2. By extension of water service for general use the proportion of the population supplied at the end of the year should judge to be about three-fourths, in the eastern border of the town. Perhaps a more correct estimate could be made from data, obtained at Board of Public Works, City of Providence.

4. No new ordinances for any sanitary purpose. All the sanitary ordinances have been well enforced.

5. Board of health, the town council.

6. Health officers, Thomas C. Lawton, M. D., Frank A. Payan, M. D., Charles A. Barnard, M. D., Edgar P. Holbrook, Chief of Police.

7. Gratuitous vaccination was provided during the past year.

8. Undertakers have promptly sent in their returns of death, as far as I know, except that Undertaker Osgood seldom makes returns here.

W. F. KING, *Town Clerk.*

NORTH PROVIDENCE.

1. Nothing for the promotion of public health contemplated by the town authorities during the year.

2. Not much extension of water service for general use.

3. No public sewers.

4. No new ordinances for any sanitary purpose. Sanitary ordinances have been enforced.

5. Board of health, the town council.

6. Health officer, Sanford E. Kinnecom, Esq.

7. No vaccination been done gratuitously for a number of years.

8. As to undertakers sending in their returns of death, there are a few not very prompt.

T. F. ANGELL, *Town Clerk.*

NORTH SMITHFIELD.

1. No particular action for the promotion of the public health was taken by the town authorities during the year.
2. No extension of water service for general use.
4. The sanitary ordinances have been enforced.
5. Board of health, the town council.
6. Health officer, John B. Green, Esq., Slatersville.
7. No gratuitous vaccination was provided in this town during the past year.
8. As to undertakers, there are none in town. Some returns from outside, but not often in season to report.

B. A. ANDREWS, *Town Clerk.*

PAWTUCKET.

1. A very considerable amount of attention has been given by the authorities to measures for the promotion of the public health during 1891. Private enterprise has also contributed to the same purpose.

2. The public water service has been quite largely extended. See report of Water Commissioner and Superintendent, Water Works, appended.

3. The Sewer Commissioners have been quite active in the construction of new sewers, and in the repair and re-construction of old sewers. The following are extracts from their report:

"There have been 73 catch basins and 20 gutter inlets, put in during the year, making the total, to November 30th, 1891, 404 catch basins and 62 gutter inlets, and furnishing 466 places at which storm water is removed from the surface of the streets.

* * * * *

By the schedule of length of sewers in the Blackstone river water shed constructed during year 1891, there has been constructed 1 699 miles of sewers, which added to those previously reported, 15.2375, makes a total in the Blackstone river water shed of 16 9365 miles.

There has been constructed in the Moshassuck river water shed during the year 1891, 1.0425 miles, previously reported, .7536 miles, a total in the Moshassuck river water shed of 1.7961 miles.

The total number of miles of sewers constructed to date in the whole city is 18 7326 miles, of which 3 3188 miles are brick sewers; the remainder, with the exception of 397 feet of iron pipe, is of salt-glazed sewer pipe varying in diameter from 8 to 24 inches.

Since December 1, 1890, there have been 125 private drain connections made with the public sewers, making the total number of private drain connections 914.

We would respectfully recommend that the appropriation for maintenance and care of the sewer department, including care of catch basins be \$9,000.00.

All of which is respectfully submitted,

ISAAC SHOVE,	}	Board of Sewer Commissioners.
FRED W. EASTON,		
WILLIAM P. MORONEY,		

A. R. SWEET, Engineer and Superintendent.

4. The sanitary ordinances are fairly well enforced.
5. The board of aldermen act as a board of health.

EXTRACTS FROM THE REPORT OF THE SUPERINTENDENT OF WATER WORKS.

During the year the works have been extended by mains laid in different streets to the extent of 11,213 feet. Total length of mains, to date $110\frac{1}{2}$ miles. Hydrants have been set to the number, for year, of 11, which added to 821 as per last year's report, make a total of 832 on the works.

Applications.

Applications for water have been made as follows :

In Pawtucket Division	167
" Central Falls "	41
" Lonsdale and Valley Falls Division.....	54
" East Providence Division.....	65
" Ashton Division	1
Total for year.....	328

Services.

163 services have been made in Pawtucket.

48	"	"	"	"	Central Falls Division.
44	"	"	"	"	Lonsdale and Valley Falls Division.
2	"	"	"	"	Ashton Division.
75	"	"	"	"	East Providence Division.

332

5322 services in use as per last year's report.

5654 number of services in use.

Meters.

Two hundred and fifty-nine services have been supplied with meters as follows :

150	in Pawtucket.
45	" Central Falls Division.
26	" Lonsdale and Valley Falls Division.
37	" East Providence Division.
1	" Ashton Division.

259

To the above add those in use as per last year's report, 3528, making a total of 3787. Deduct from above 13 services that have been discontinued, leaving 3774 metered services in use.

Whole cost of works to date	\$1,604,799 37
Bonded debt.....	\$ 500,000 00 at 5 per cent.
" "	1,000,000 00 " 4 " "
Notes out as per city treasurer's report...	65,639 37

\$1,565,639 37

Amount of sinking fund due to the water works account, \$315,000 00

I will take a few of the most important items from the engineer's report, as shown in the table, so they will be more noticeable.

The total number of gallons pumped during the year is 1,410,733,112.

Average daily consumption, 3,865,022.

Total cost of coal, oil, waste, gas, (repairs on engines and boilers) and engineers' and firemen's salaries for the year is \$14,052,13.

Table showing Amount of Rain and Melted Snow for the Year Ending November 30, 1891.

December.....	5.06
January.....	6 57
February.....	5.60
March.....	5.41
April.....	3.34
May.....	2.16
June.....	4.00
July.....	3.52
August.....	4.95
September.....	2.43
October.....	4 22
November.....	2.40

Total Rain and Melted Snow, 49.66 inches.

Total depth of Snow, 44 inches.

In conclusion I may say the works are in a condition that will bear the closest inspection, and we cordially invite any tax-payer or interested citizen to visit the same. Our pumping stations are visited by scientific gentlemen from far and near.

I recall the visit of the American Society of Mechanical Engineers last June, which was a high compliment to us, and I trust they were amply repaid for the same in the examination of the engines and the social courtesies tendered them at the time.

The engineers in charge of the different stations are always glad to show visitors around the works, and Mr. John H. Walker, the chief engineer, takes great pride in having all the stations kept in perfect order, and I may say that all the heads of the different departments as well as the men generally, feel a pride in their work.

Thanking His Honor the Mayor, the City Council and the Honorable Board of Water Commissioners, for continued courtesies, I remain respectfully yours,

EDWIN DARLING, *Superintendent.*

SCITUATE.

1. No proceedings for the promotion of public health by the town authorities during the year.
2. No water service for general use.

4. No new ordinances for any sanitary purpose. Sanitary ordinances have been enforced.

5. Board of health, the town council.

6. Health officer, W. J. Smith, M. D., North Scituate.

7. No gratuitous vaccination provided during the past year.

D. H. REMINGTON, *Town Clerk.*

SMITHFIELD.

1. No unusual work for the promotion of public health by the town authorities.

2. No water service for general use.

3. None but of private construction.

4. Sanitary ordinances have been enforced.

5. Board of health, the town council.

6. Health officer, Jenckes Smith.

7. Gratuitous vaccination was not provided in this town during the past year.

8. (No statement as to undertakers.)

O. A. TOBEY, *Town Clerk.*

WOONSOCKET.

1. Proceedings regarding the promotion of public health were largely taken in this city by the authorities during year.

2. There was a large extension of water service for general use. The population supplied with the same at the end of the year about 15,000.

3. A sewerage system will be established in a short time.

4. All the sanitary ordinances have been enforced.

5. Board of health, the town council.

6. Health officer, Dr. G. W. Jenckes.

7. Gratuitous vaccination not provided during the past year.

8. Undertakers have promptly sent in their returns of death.

W. C. MASON, *City Clerk.*

EXTRACTS FROM THE INAUGURAL ADDRESS OF HON. DANIEL B. POND, MAYOR,
JAN. 4, 1892, IN RELATION TO MEASURES FOR THE FURTHER
PROMOTION OF PUBLIC HEALTH.

Water Works.

It will be seen from the reports of the commissioners and the superintendent that a large outlay has been made in the department, and a correspondingly large amount of work has been accomplished. The pipes have been largely ex-

tended and the hydrants increased in numbers. A new tank has been built and connected with the works. The Manville extension has been completed, and the enlargement of the pumping station is now under way. It now remains to finish this work; to put in the new pumps; to make a new connection with the reservoir, and to lay the proposed new mains from the stations to the tanks. The new suggestions of the commissioners are: That extensions should be made when the prospective revenue will cover 5 per cent. of the cost; that all bills of the department be turned over to the treasurer for collection; that a contingent appropriation be made and put at the disposal of the commissioners, and that steps be taken towards building a new storage reservoir. All these suggestions will come before you for consideration.

Public Parks.

Much discussion and criticism has been indulged in for some time on account of the purchase of parks. If a mistake was made it was in not sufficiently educating and preparing the public mind before concluding the purchase. But the parks are ours, at a moderate cost, and the people will soon learn that they can find in them comfort, recreation and health. The consensus of opinion in nearly every progressive city in this country and in Europe is in favor of parks, and it can hardly be assumed that the reasons for objecting to such a measure in this city is to outweigh the united and combined judgment of all other cities. The mayor recommends that the management and control of the parks be put into the hands of three commissioners, who shall serve without pay; that the commissioners be instructed to have the parks laid out in an approved manner by a competent landscape gardener, and that small appropriations be made for their improvement from time to time, so that their adornment and accommodations may be made in accordance with a general and well-defined plan. Thus the parks will in time become the ornament and pride of the city—"a thing of beauty and a joy forever."

As a matter of information your attention is called to the following statement of park acreage in several cities of this country and Europe:

Bridgeport.....	240 acres
Worcester	280 acres
New Haven.....	384 acres
Cincinnati.....	539 acres
Buffalo.....	620 acres
Detroit.....	740 acres
Baltimore.....	832 acres
Brooklyn.....	940 acres
Washington..	1,000 acres
San Francisco.....	1,181 acres
Boston.....	2,000 acres
St. Louis.....	2,232 acres
Chicago.....	3,000 acres
Philadelphia..	3,000 acres
New York.....	4,000 acres

Montreal.....	550 acres
Amsterdam.....	800 acres
Brussels.....	1,000 acres
Dublin.....	1,900 acres
Berlin.....	5,000 acres
Vienna.....	8,000 acres
London.....	22,000 acres
Paris.....	58,000 acres

Public Bath Houses.

The mayor believes that it would conduce to the health and comfort of the community to have two or three bath houses established in the city, located at convenient points, also houses of public convenience. The cost of these structures would be slight, but the advantages would be quickly and duly appreciated by the public.

Sewerage.

The mayor, speaking in a semi official way for the joint special committee having the matter in charge, expresses his regret that the committee was unable to make its full and final report to the council before the expiration of the year, but the matter is in such a state of progress that he hopes that the council can be put in possession of all the facts, details and recommendations at an early day, so that a forward move may be made by the city. It is well known to the public that the committee have two reports upon a system of sewerage in their hands from expert engineers. Both engineers agreed upon the place of disposal of the sewerage—the meadows below the Hamlet—but did not agree upon the method of treatment. There were other and material differences between the two reports; for instance, one recommended the delivery of the sewerage by gravity, the other advised the more expensive way of pumping a portion of it. It seemed to the committee that the cheapest way would be the best if practicable, and that this was purely a question of engineering. If no conclusion is or can be reached between the engineers promptly, the mayor will advise that a third and impartial expert in such matters be called in to settle the difficult points, so that the council can adopt, if thought best, the recommendations of the committee for a general system and be prepared to order the construction of some portion of the work at an early day. The necessary land, rights of way, etc., should be secured at the earliest practicable moment.

PROVIDENCE CITY.

1. A very large amount of work having relation directly and indirectly to the promotion of the public health, was contemplated, and in large amount completed by direction of the city authorities, during the year 1891. The removal of garbage, a great proportion of which was cremated, the large extension of the sewerage facilities, the extension of the public water service, and by the enforcement of sanitary ordinances in various directions.

2. Nearly the entire population supplied by the public water service. See

also extracts from report of Department of Public Works and City Engineer, appended.

3. Sewers largely increased during the year 1891. Large main sewers, as a part of the new improved system of sewerage for the city, have been constructed, and now all the compact parts of the city have ample sewerage facilities and nearly all the population accommodated. See extracts of reports appended.

4. Special statutes for the city in relation to milk and the Inspector of Milk, and all sanitary ordinances enforced.

5. The board of aldermen are constituted the legal board of health.

6. The executive health officers are, Charles V. Chapin, Superintendent of Health, John S. Rogers, Sanitary Inspector, Gardner T. Swarts, Medical Inspector, Charles H. Leonard, Superintendent of Vaccination.

7. Gratuitous vaccination is furnished all the residents of the city every Saturday at the City Hall. Every pupil in the public schools must have a certificate of efficient vaccination.

8. Undertakers cannot dispose, by burial or removal, of the bodies of the dead without a permit from the City Registrar.

EXTRACTS FROM THE INAUGURAL ADDRESS OF HON. WILLIAM K. POTTER, MAYOR,
JANUARY 4TH, 1892.

Water Works.

The number of buildings erected during the year in the city and its immediate suburbs has occasioned the laying of about seventeen miles of water pipe, and over eight hundred small supply pipes for consumers. This is in excess of any year since 1876, when the works were in progress of construction. It indicates a rapid growth of the city, and its results are felt in the receipts for water during the year. Notwithstanding the large reduction in water rates that went into effect January 1, 1891, the commissioner is led to hope that a still further reduction can be made in the near future, and still maintain the department upon a self-supporting basis. The increase in the consumption of water demands that additional pumping facilities should be provided at Pettaconsett very soon.

Sewers.

During the year the work on the improved sewerage system has been vigorously pushed forward. There practically remains to be built but a small portion of section 6, a little over one-half of section 9, and a portion of Hamilton street sewer. When these and the sewer in Gordon avenue, etc., are built, the outlets will be provided for the discharge for the sewage for the western and southern sections of the city that have hitherto been deprived of necessary sewers. The completion of these trunk sewers has called for the building of an unusual number of lateral sewers, aggregating about 7 1-3 miles.

SUMMARY OF STATEMENTS MADE IN THE REPORTS OF THE CITY ENGINEER AND
COMMISSIONER OF PUBLIC WORKS.

Water Works.

Total amount or length of water pipes, all sizes, laid during the year 1891, 17.31 miles.

Sixty-eight new hydrants were set, three in Cranston, seven in Johnston, and fifty-eight in the city.

Total number of hydrants set to December 31, 1891, fourteen hundred and two, including sixty-eight in Johnston, but not including twenty-nine post hydrants set in Cranston.

Statement of sizes and lengths of pipe laid since the commencement of the work, considered as mains :

36-inch.....	10,084	feet.
30-inch.....	59,893.04	feet.
24-inch.....	43,418.92	feet.
20-inch.....	9,626.59	feet.
16-inch.....	31,922.58	feet.
12-inch.....	75,102.35	feet.
10-inch.....	14,652.26	feet.
8-inch.....	199,301.61	feet.
6 inch.....	840,889.79	feet.

Total.....1,284,891.14 feet.
or 243.35+miles.

Total amount or length of water pipes laid in adjoining towns, to December 31, 1891, 32.97 miles.

Nearly 1,000 applications for water were made during the year, making the total number December 31, 1891, seventeen thousand four hundred and sixteen.

The total number of service stops opened to December 31, 1891, inclusive, was sixteen thousand seven hundred and twenty. The number in actual use December 31, 1891, was fifteen thousand seven hundred and twenty-three.

Cost of water works *construction* from November 8th, 1869, to January 1st, 1892, \$5,737,692 91. Cost of maintenance during the same period, \$1,043,259.96. Amount of revenue from water sold during the same period, \$5,137,225.33.

Total number of meters in use December 31, 1891, was 9,972.

Amount of consumption of water during 1891, was 2,654,305,679 gallons.

Average amount of monthly consumption, 221,192,140 gallons.

Average amount of daily consumption, 7,272,070 gallons.

Sewers.

During the year ending December 31, 1891, there have been constructed about 6.721 miles of pipe, and 0.947 miles of brick sewers, making a total of 7.668 miles of sewers built, which, added to the length previously constructed—67.38 miles—makes a total length of sewers at date, January 1, 1892, 75.048 miles.

The total length of pipe sewers to December 31, 1891, was 53.581 miles and 21.467 miles of brick sewers. 183 catch-basins have been built during the year, making the total to date 2,431.

The *net* expenditure for construction of sewers to December 31, 1891, inclusive, was \$2,927,385.57.

The *net* expenditure for maintenance of sewers to December 31, 1891, inclusive, was \$343,692.77.

WASHINGTON COUNTY.

CHARLESTOWN.

1. Nothing new for the promotion of public health completed in this town by the town authorities.
2. No water service for general use.
3. No public sewers.
4. No new ordinance in relation to health.
5. Board of health, the town council.
6. Health officer, A. A. Saunders, M. D.
7. Gratuitous vaccination has not been provided during the past year.
8. Most of the undertakers have promptly sent in their returns. H. B. Gavitt, of Westerly, occasionally attends funerals in this town but *never* sends in returns.

GEORGE C. CROSS, *Town Clerk*.

EXETER.

1. No particular work for the promotion of public health contemplated by the town authorities during the year.
2. No water service for general use.
3. No public sewers.
4. No new ordinances for any sanitary purpose. Sanitary ordinances have been enforced.
5. Board of health, the town council.
6. Health officers, not appointed.
7. No gratuitous vaccination provided during the past year.
8. Undertakers quite promptly send in their returns of death.

J. H. EDWARDS, *Town Clerk*.

HOPKINTON.

1. No particular action for the promotion of public health by the town authorities during the year.
2. No public water service.

3. No public sewers.
4. All the sanitary ordinances have been enforced.
5. Board of health, the town council.
6. Health officer, Leander M. Barber.
7. Gratuitous vaccination has been provided in this town during the past year.

E. R. ALLEN, *Town Clerk.*

NARRAGANSETT.

1. No important work for the promotion of public health contemplated by the town authorities during the year.
2. Some extension of water service for general use. Proportion of the population not known.
3. Increased aggregate length of sewers.
4. Sanitary ordinances have been strictly enforced.
5. Legal board of health, the town council.
7. No gratuitous vaccination provided during the year.
8. All undertakers do not promptly send in their returns of death. John P. Case does not.

W. H. CASWELL, *District Clerk.*

NORTH KINGSTOWN.

2. No extension of water service for general use.
3. No sewers, only surface drainage for highways.
4. No new ordinances for any sanitary purpose. Sanitary ordinances have been enforced.
5. Board of health, the town council.
6. Health officer, Lance de Jongh, Wickford.
7. Gratuitous vaccination not provided during the past year.
8. Undertakers do not promptly send in their returns of death.

C. T. CROMBE, *Town Clerk.*

RICHMOND.

1. Nothing new for the promotion of public health by the town authorities, or by private enterprise, during the year.
2. No water service for general use.
3. No public sewers.
4. No new ordinances. The sanitary ordinances have been enforced.
5. Board of health, the town council.
6. Health officer, A. H. Eccleston, M. D., Wood River Junction.

7. Gratuitous vaccination has been provided during the past year. The proportion of the population vaccinated, about one thirteenth.

8. Undertakers have promptly sent in their returns of death.

H. P. CLARKE, *Town Clerk.*

SOUTH KINGSTOWN.

1. No proceedings for the promotion of public health by the town authorities during the year.

2. Water service for general use, about the same as last year.

3. No sewers.

4. No new ordinances for any sanitary purpose. The sanitary ordinances have been enforced.

5. Board of health, the town council.

6. Health officer, Walter S. Watson.

7. Gratuitous vaccination not provided during the past year.

H. B. PERRY, *Town Clerk.*

WESTERLY.

1. Nothing particular for the promotion of public health contemplated by the town authorities, or by private enterprise, during the year.

2. Some extension of water service for general use. The proportion to the population supplied at the end of the year about 40 per cent.

3. No increased length of sewers.

4. Ordinances in abatement of nuisances and other sanitary purposes collated and revised. See appended. All the sanitary ordinances have been enforced.

5. Board of health, the town council.

6. Health officers: James M. Pendleton, Superintendent of Health; Benj. York, Health Officer.

7. Gratuitous vaccination was provided during the past year, but the number vaccinated was very small.

8. The undertakers have promptly sent in their returns of death.

WM. HONSEY, *Town Clerk.*

Revised Ordinances Not Before Published in the State Board of Health Report.

AN ORDINANCE FOR THE SUPPRESSION AND PREVENTING OF NUISANCES.

It is ordained by the Town Council of the Town of Westerly as follows :

SECTION 1. Any person causing or suffering filthy water to collect on his premises, or premises occupied by him, so as to be prejudicial to health, or causing or suffering the same to run into any public street or highway in this town, and not remedying the same within twenty-four hours after notice from any

health officer; and if any person shall throw any coal ashes, cinders, shavings, manure, oyster, clam, lobster or other shells, or filth, into any of the streets or highways in the village of Westerly, or other thickly settled parts of said town, shall be fined not less than three dollars nor more than ten dollars.

SEC. 2. It shall be the duty of the Superintendent of Health of this town to examine into the state and condition of every place and part of said town where such officers shall suspect or be informed that there exists any matter or thing which is or may become injurious to the health of the inhabitants thereof.

SEC. 3. Whenever it shall appear to the satisfaction of the Superintendent of Health that there exists upon any premises owned or occupied by any person any dirt or offal, or any animal or vegetable matter, or the contents of any hog-pen, cow-yard, barn, privy, drain or vault, injurious to health or the neighborhood, it shall be the duty of the Superintendent of Health to cause the owner or occupant of such premises to be notified in writing of the existence of such nuisance or annoyance, and to direct such owners or occupants forthwith to remove or abate the same; and if such nuisance or annoyance shall not be abated within twenty-four hours after such notice, such owners or occupants shall, for each and every day they shall suffer such nuisance or annoyance to remain after the notice aforesaid, be liable to pay a fine of not less than five dollars nor more than twenty dollars.

SEC. 4. If such nuisance or annoyance shall not be abated by the owners or occupants of the premises where such nuisance or annoyance exists, at or before the expiration of the notice mentioned in the next preceding section of this ordinance, and if in the opinion of such health officers the expense of abating the same will not exceed ten dollars, then it shall be the duty of such Superintendent of Health to authorize in writing the sheriff of the county of Washington, his deputies, or the town sergeant, or either of the constables or police officers of said town, forthwith to cause such nuisance or annoyance to be abated. And the town council shall order the expenses thereof, not exceeding ten dollars, to be paid out of the town treasury of said town to the officer abating the same, which said expenses, so paid as aforesaid, shall be recovered from the party causing or continuing said nuisance or annoyance, in an action of debt in the name of the town treasurer of said town, before any court of competent jurisdiction.

SEC. 5. Whenever it shall appear to the satisfaction of the Superintendent of Health that there exists upon the premises owned or occupied by any person any matter or thing injurious to the health of the inhabitants of any part of said town, or which, in his judgment, may originate or conduce to the spreading of any infectious or contagious disease, and that the expense of abating such nuisance or other cause dangerous to health shall be estimated at more than ten dollars, it shall be the duty of the Superintendent of Health, as soon as the exigency of the case shall reasonably require, to report the same in writing to the town council, setting forth the particulars of such nuisance and the probable expense of removing the same, as nearly as may be, and the owner or occupant of the premises upon which such nuisance or nuisances exist, or the person who may have caused, continued or permitted the said nuisance or nuisances, shall be forthwith notified to appear before the town council, at such time as the

council shall appoint, to show cause, if any, why said nuisances shall not be abated or removed. And said council, upon satisfactory evidence to them submitted that said nuisance exists, may order the sheriff of said county, his deputies, or the town sergeant, or either of the constables or police officers of said town, forthwith to abate the same, and the expenses thereof shall be paid out of the town treasury, and be recovered from the party causing or continuing the same, in the same manner as is prescribed in the next preceding section of this ordinance.

AN ORDINANCE IN RELATION TO PRIVY VAULTS AND CESSPOOLS.

It is ordained by the Town Council of the Town of Westerly as follows :

SECTION 1. No person shall allow the contents of any privy vault or cesspool to become in any way a nuisance or offensive; and when required by the Superintendent of Health any owner of such privy vault or cesspool shall disinfect the same in such manner as may be required by said superintendent.

SEC. 2. Every owner, occupant, agent or other person, having charge of the land on which any privy vault within the limits of this town is located, shall cause such vault to be emptied at least once between the first day of December and the first day of May, in every year, and at no other time without the written permission of the Superintendent of Health. No person shall allow the contents of any privy vault or cesspool to rise within one foot of any part of the top.

SEC. 3. No person or persons, either by themselves or by their agents or servants, shall carry or cause or permit to be carried, into or through any highway or street in this town, any part of the contents of any privy vault or cesspool, in any cart, wagon, or other vehicle, except between the first day of December and the first day of May, without the written permission of the Superintendent of Health.

SEC. 4. Every owner, occupant, agent, or other person, having charge of the land on which any privy vault is located, shall disinfect the contents thereof, and keep such vault free from offensive odors.

SEC. 5. From the first day of May until the first day of November in each year, no person shall remove any portion of the contents of any privy vault therefrom, unless such contents are previously disinfected, so that the removal thereof shall cause no offensive odor.

SEC. 6. No person or persons, either themselves or by their agents or servants, shall carry the contents of any such vault or cesspool, or any part thereof, through or across any highway or street in this town, in any cart, wagon, or other vehicle, which shall not be effectually covered, water-tight, and kept well painted and cleaned on the outer surface.

SEC. 7. No person shall remove or transport through any street or highway in the town the contents of any cesspool, privy vault, or any offensive substance or liquid, unless the same shall be removed or transported in such manner as shall prevent the escape upon the vehicle on which the same is conveyed, or upon the street or highway, of any such material or liquid so removed or transported as aforesaid.

SEC. 8. No person or persons shall station or stand, or suffer to be stationed or to stand, any cart, wagon, or other vehicle having therein any part of the contents of any privy vault or cesspool (except while loading) in any highway or street in the town.

SEC. 9. Every cart, wagon or other vehicle used within this town to carry the contents of any cesspool or privy vault, or any part thereof, into or through any part of any highway or street in this town shall be licensed, and shall have placed upon the outside, and on each side of the same, and so that the same can be distinctly seen, a tin sign with the number of the license and the number of cubic feet such vehicle will contain, in plain, legible white figures of not less than three inches in size upon a black ground, and every such license shall be granted by the Superintendent of Health without charge.

SEC. 10. No person shall use, or permit, or suffer to be used, any such cart, wagon or other vehicle without the same being licensed and numbered as aforesaid, and every person who shall neglect or refuse to disinfect the contents of any privy vault so as to remove all offensive odors therefrom within thirty-six hours after receiving notice so to do from the Superintendent of Health.

SEC. 11. Every person violating any of the provisions of the ten next preceding sections shall pay a fine of not less than five dollars nor more than twenty dollars.

SEC. 12. No person shall at any time place or deposit in any street-opening to any sewer, any animal or vegetable matter whatever, solid or liquid, or any other filthy substance.

SEC. 13. No person shall deposit or allow to be deposited in any privy vault or cesspool, or water closet, any swill, rubbish, refuse, or any other substance except that of which any such place is the appropriate receptacle, nor shall any surface water be allowed to run into any privy vault or cesspool.

SEC. 14. Every person violating any of the provisions of the two next preceding sections shall pay a fine of not less than ten dollars nor more than twenty dollars for each offense.

REPORTS OF
HEALTH OFFICERS.

1891.

CIRCULAR TO HEALTH OFFICERS.

Following the practice of previous years and in order to ascertain what degree of interest was taken in the work of sanitary inspection, what knowledge of the prevalence of contagious, infectious, or other acute and dangerous diseases, what means had been taken to prevent the spread of such diseases, and what other work had been accomplished in the different towns by the Health Officers of the same during 1891, the following circulars were sent at the close of the year :

CIRCULAR No. 131.

OFFICE OF SECRETARY OF THE STATE BOARD OF HEALTH.

PROVIDENCE, Jan. 1, 1892.

To the Health Officer of

DEAR SIR:—An important feature of the Annual Report of the Rhode Island State Board of Health is that of giving a connected history of the occurrence of contagious and epidemic diseases from year to year, as they may have prevailed in the different towns, whether epidemically or in a less degree, together with the location in the town (village or otherwise), and season of the year.

If the proportion of the fatal cases to the whole number of the cases of the same disease could be given, the value of such reports would be very much enhanced. Such proportion can be ascertained only in such towns as *by town ordinance* require physicians to report all cases of such diseases as come within their charge.

An approximate proportion can, however, be given, after the subsidence of the disease, by inquiry of persons living in the immediate neighborhood of the prevalence of such disease, as to the number of the sick, or by house to house visitation where the sickness occurred, with the same inquiry, and by the comparison of the deaths with recoveries as so ascertained.

It is for the purpose of obtaining such information, in full or approximate, and also what may have been done to prevent and restrict diseases, that the questions in the enclosed circular are sent to the various Health Officers of the State.

If, therefore, you will have the kindness to reply to the questions in the said circular, according to the best knowledge you have been able to obtain, and for-

ward in the enclosed stamped envelope, you will favor one of the most important interests of the State, and greatly oblige,

Yours truly,

CHAS. H. FISHER,

Sec. State Board of Health.

P. S.—In the replies on the blank circular of questions, in relation to the extent or degree of prevalence of any disease, the following signs may be used.

The star (*) preceding the name of any disease will indicate an epidemic prevalence; the sign plus (+) a large prevalence; and the sign equals (=) a moderate prevalence.

To Health Officers who are not physicians, it may be said that the term epidemic, within the meaning of the questions proposed, is the prevalence of some disease to the extent of one or more persons affected with the disease to every five or six persons living in adjacent tenements or in the near neighborhood, or a smaller proportion, not less than one case of the disease in every ten or twelve of the population, extending over a large area of territory. One sick in every twelve to sixteen persons might be called a **large prevalence**, and one sick in every twenty to twenty-five, a **moderate prevalence**. The number of cases of any one disease may have to be estimated, but make them as nearly correct as possible.

C. H. F.

CIRCULAR No. 132.

DEAR SIR:—Replies to the following questions, as suggested in the accompanying circular (No. 131), are respectfully solicited; said replies to be made on this circular, following each question:

1. Name of Town.

2. Name of Health Officer.

3. Have there been, within your knowledge, any epidemics, or any large prevalence of contagious or infectious diseases in your town during 1891? If so, of what disease or diseases? in what locality or localities? how many of each disease? * number of deaths? and in what months of the year?

Diseases.	Locality.	No. of Cases.	No. of Deaths.	Months in which they occurred.

* According to the best knowledge obtainable,

4. Was isolation maintained or attempted ? *

5. What proportion of the sick, if any, were isolated ?

6. Was any inspection of premises made, where sickness prevailed, as to the sanitary condition of the cellars, pantries, sinks, sink drains, water-closets, if any, cesspools, out-house privies, distance of wells from accumulations of filth, etc., etc. ? If so, please give a general statement as to whether they were sanitarily in conditions good or bad, or if anything or place was unusually unsanitary, give a full description. Or if the cause of any outbreak of disease was found, please state what ?

7. Did you make any sanitary inspections during 1891, by order of the town council or from your own option ? If so, what were they and how made ?

8. Do you know of any location in your town that seems to be particularly unhealthy to any considerable number of persons ? If so, and the cause is suspected, can such cause be removed at any reasonable expense ?

9. Do you report to your town council nuisances dangerous to the public health, or unsanitary premises within your knowledge ; or of buildings unsafe for occupants in case of fire ? (See Chapter 495, Section 6, Public Laws.)

10. Have you knowledge that any serious disease of domestic animals has largely prevailed in your town during the year ? If so, what disease or diseases, and in what locality ?

Have you a copy of the "Manual for the Health Officers of Rhode Island" at hand ? If not, one or more will be forwarded immediately if desired. *A new copy will be prepared as soon as the Statutes are revised.*

* According to the best knowledge obtainable.

REPORTS OF HEALTH OFFICERS.

BRISTOL COUNTY.

1. BARRINGTON.

2. Health Officers, the Town Council.

3. In reply as to whether there has been, within his knowledge, any epidemics or any large prevalence of contagious or infectious diseases in this town during 1891, the town clerk replies, "I know of nothing with which to fill this circular."

1. BRISTOL.

2. Health Officer, Geo. H. Peck.

3. The following contagious or infectious diseases have prevailed in this town during 1891: Scarlet Fever, compact part and suburbs, 14 cases, 1 death, January, 4; February, 2; March, 3; April, 1; May, 2; July, 1; September, 1. Typhoid Fever, compact, 21 cases, February, 11; March, 1; July, 1; August, 5; September, 1; October, 1; November, 1. Measles, compact part of town, 4 cases, March, April, June and August, 1 each.

4. Isolation was maintained.

5. All were isolated.

6. Premises examined in every case. All found in fair sanitary condition.

7. Sanitary inspections during 1891 were made only in above cases of sickness.

8. Do not know of any location in the town that seems at this time to be particularly unhealthy.

9. I report to the town council all nuisances dangerous to the public health.

10. No serious disease of domestic animals has largely prevailed in this town during the year.

1. WARREN.

2. Health Officer, M. B. Conroy.

6. No inspection in cases of sickness required.

7. From my own option I made about twelve sanitary inspections.

8. I do not know of any location in town that seems to be particularly unhealthy.

9. I report to the town council nuisances dangerous to the public health when I know of any.

10. No serious disease of domestic animals in town during the year.

KENT COUNTY.

1. EAST GREENWICH.

2. Health Officer, E. G. Carpenter, M. D.

3. No epidemic during year, except Influenza, and that in December. I regard it contagious. Universal. Number innumerable. Very few deaths. December.

4. Scarlet Fever, Diphtheria, etc., are always isolated.

6. No special inspection, but attention has been paid to these matters, and in many cases cleanliness is not properly observed, but there are no particularly unsanitary localities.

7. Did not make any sanitary inspections during 1891, by order of the town council, but from my own option a general observation in my rounds of professional practice.

8. No location in town that seems to be particularly unhealthy.

9. I should report to the town council at once nuisances dangerous to the public health, if any were known to me.

10. There has been no serious disease of animals except isolated cases of glanders.

1. WARWICK.

2. Health Officer, Albert G. Sprague.

3. As to any epidemic, or large prevalence of contagious or infectious diseases in town during 1891, these cases of Scarlet Fever, Pneumonia, Whooping Cough, Measles, and La Grippe. Number not known. Some of them epidemic in different places. Fatality rather small.

4. Isolation was not maintained in all cases.

5. The proportion of the sick which were isolated, not known. No data to estimate from.

6. But few inspections called for.

7. Mostly made on complaint of adjoining neighbors.

8. No location in town particularly unhealthy.

9. Reports promptly made to the town council of nuisances dangerous to the public health.

10. No diseases of domestic animals largely prevailed during the year.

1. COVENTRY. No report.

1. WEST GREENWICH. No report.

NEWPORT COUNTY.

1. MIDDLETOWN.

2. Health Officer, John Peckham.

3. No large prevalence of contagious or infectious diseases in town during 1891.

Diphtheria; southern part of town; one case only; one death; May.

4. Isolation was maintained.

6. Inspection of premises made where sickness prevailed. Sanitary conditions good. No cause was found. The patient was a female, four years old. Was at once removed to Newport Hospital, where she died.

7. Of my option, inspected locality where night soil from Newport was dumped in large quantities, the council then prohibited the bringing it into the town from the first of May to first of November.

8. Do not know of any location in town that seems to be particularly unhealthy.

9. I reported as a nuisance the premises where seventy-five or more horses were brought from Newport, four about half buried. An ordinance was passed at once which put a stop to bringing them.

10. One case of glanders of an old horse, which was soon found and the horse killed; the owner prosecuted.

1. NEWPORT CITY.

2. P. S. Kaull, sanitary executive officer.

3. The following extracts from the Report of the Board of Health to the City Council will cover the questions proposed in Circular No. 132:

Zymotic Diseases.

Seventy-seven deaths during the year were attributed to zymotic diseases, an increase of seven over the year previous. The following are the most prominent causes of death under this class:

Diarrhoeal Diseases—Comment has already been made in part upon this class. In the First ward there were eight deaths from bowel trouble; in the Second, four deaths; in the Third, four deaths; in the Fourth, six deaths, and in the Fifth twenty two deaths. One death occurred in May, one in July, thirty-nine in August and September, and three in October. There were no deaths from intestinal disorders during other months of the year. The number of deaths from cholera infantum (27) was an unusually high record. Dysentery was less extensive than for three years—five deaths being reported therefrom. The death rate for 1891 from this class of diseases, 10.3 per cent. of the total mortality, while about the average for the past five years, is much higher than we should have.

Typhoid Fever—Twenty-seven cases of this disease, with eleven deaths therefrom, were reported in the year—an increase of twenty cases and ten deaths over 1890.

Scarlet Fever—Three cases reported, with no deaths.

Diphtheria and Croup—Eighteen cases of diphtheria were reported with ten deaths therefrom. Croup claimed twelve victims, an unusually large number for the city. The board of health sent during the year five cases of diphtheria to the emergency ward of the Newport Hospital and five private cases of the same disease have also been under the same merciful and judicious management. The isolation thus obtained, together with the notice of warning posted on all houses harboring patients with contagious diseases, and the disinfection of the premises ordered by the board of health, have greatly diminished the number of contagious diseases during the year.

In reviewing the mortality tables we find an increase over the previous year of 30 deaths from pneumonia, an increase of 20 deaths from old age, an increase of 9 deaths from typhoid fever, an increase of 10 deaths from croup, a decrease of 10 from dysentery and a decrease of 11 from diphtheria. The number of deaths from diseases of the nervous system, from kidney disease, from consumption, from bronchitis, and from bowel trouble was practically the same as during the previous year.

We also find that during three periods of the year the number of deaths was noticeably in excess of the same periods in previous years. In March and April, Newport was visited by an epidemic of the influenza, increasing the number of deaths by 20 over the same months of 1890. In August the number of deaths was 57, in September 50; an unusually high record. During this second period there were reported 39 deaths from bowel trouble out of a total of 44 for the whole year. The chief influence which induced this large mortality was apparently of atmospheric origin, aided in many instances by unsanitary surroundings. During August and the early part of September, the atmosphere was oppressive and humid and exerted a depressing effect upon the human organism, especially upon the young.

At the same time, the drought had greatly diminished the water supply in wells, cisterns and the general supply, and in consequence there was an increase of the organic impurities in the water. It might be inferred therefore that the lowering of the water supply was a possible cause of the mortality from bowel trouble. The records show, however, that thirty-four deaths were of infants under two years of age, most of them being under one year of age; (27 from cholera infantum, 2 from diarrhoea, 2 from dysentery, 1 from enteritis, 2 from gastro-enteritis). The causes of death at this early age were due to errors in diet, the unsanitary condition of habitations and the depressing effect of the atmosphere. Four deaths from cholera morbus were doubtless due to errors in diet, leaving but six deaths from bowel trouble of uncertain origin.

During the third period, the month of December, fifty-nine deaths were reported, an excess of forty over the same month of 1890. In this month Newport had its second visitation for the year of La Grippe.

With a full knowledge of the diseases prevailing during the year and a consideration of the mortuary records, it is evident that the influenza has been the dominant cause of the high death-rate for 1891.

In the board of health report for 1890 comment was made upon the nature and the effect of La Grippe upon the human organism. A further knowledge of the disease, gained during the epidemics of 1891, confirms, in our opinion, the statements

then made. Five deaths were immediately attributed to the influenza in 1891. These decedents were all elderly people and the prostrating effect of the disease was the direct cause of the dissolution. Indirectly, however, the influenza was the cause of a large number of deaths from diseases of the lungs. More than double the deaths from pneumonia occurred in 1891 than in any year for ten years.

The low state of vitality resultant from the grip hastened many latent cases of consumption, and diseases of all kinds more readily gained a headway, and thus aided materially in increasing the death rate. Elderly people were markedly affected by it, and many succumbed to its influences.

Consumption—Forty-three deaths, or ten per cent. of the total number of deaths, were reported from consumption (the same number as reported in 1890), an equivalent to a death rate of 2.15 per 1,000 inhabitants. Thirteen of these decedents were born in Newport, three in other sections of the State, fourteen in other States of the Union, and thirteen were of foreign birth.

Climatic influence and hereditary delicacy render certain individuals more receptive to tuberculosis, but the propagation of the disease by contagion, by the receiving into the system, through the air or food, of the tubercular bacillus, is now universally admitted, and as a result state and local boards of health have given earnest attention to mitigating the extent of the disease. Our state board of health has taken an active stand in the matter, by informing dealers in meat and dairymen of the danger incurred from tubercular cattle, and also by ordering the slaughtering of all cattle found to have tuberculosis, the state indemnifying in part for the animal destroyed. Our city board has also given considerable thought to the subject, and has in view the thorough investigation of cows found in dairies supplying the city with milk. The importance of such investigation cannot be gainsaid. Recent investigation has shown that at least five in every hundred cows in the State above the age of five years are affected with some form of tuberculousis.

Sanitary Reforms.

A growing interest has been evinced by the public during the year in sanitary reforms. A number of radical changes have been made, which must redound to an improved state of health in the city. Chief of these have been the appointment of a milk inspector, under the direction of the board of health; the instituting of a thorough examination of the water supply and a careful sanitary inspection of the water shed; the adoption of a more reliable method for the flushing of the sewer traps; the abolishing of the old method of disposal of garbage; the placing under the direction and control of the board of health the method of collection and the disposal of night soil; and the passage of an ordinance requiring sewer connection on streets possessing public sewers. These changes have met with almost universal favor. At the conference between the honorable board of aldermen and the board of health, held in August, all the above mentioned reforms were discussed, as well as the condition of the city streets.

Milk Supply—The report of the inspector of milk will be herewith appended. From the report it will be seen that 159 dealers in milk have registered, as required by law, at the office of the board of health; of this number 98 were milk

peddlers and 58 were store keepers. 181 samples of milk were examined by the inspector, with the result that, with the exception of a very few samples, the quality of the milk has satisfied the requirements of the law. The greater portion of the milk was very excellent. No prosecutions have been found necessary. A careful surveillance of the milk supply is an important duty devolving upon the board, since according to the quality of the milk is exerted a beneficial or baneful influence upon the young. The board of health has discussed and hope to carry out a thorough inspection of all dairies supplying milk to our city, for upon the sanitary condition of the dairies and the condition of the cows will depend the wholesomeness of the milk.

City Refuse—A feeling of great satisfaction has been expressed at the radical improvement adopted for the disposal of the city refuse. The ordinance forbidding the disposal of garbage upon land within the city water shed has removed an important factor of possible water contamination. The present method adopted during the year, of carrying the material to sea, has proved fairly successful in its working. Realizing that the method is in a manner an experimental one, and also its immense improvements over all former usages, fault should not be found with its shortcomings. Nevertheless, should this method be made a permanent one, radical changes are necessary from a sanitary point of view. The regulation of the time for the removal to sea, so as not to defile the shore, and the condition of the wharf need careful attention and should be placed under the immediate control of the board of health. The board of health has advocated the disposal of the city garbage by cremation, and still feels that this is the most sanitary and cheapest means of disposal.

Night Soil—By an ordinance passed during the year, the entire control of the collection and disposal of the night soil has been placed under the direction of this board. The importance of this ordinance cannot be over-estimated. Our citizens can have the assurance that from henceforth the disposal of this material will not take place in any manner that will menace the public health, as has been the case for many years past. For the present, until more satisfactory and sanitary means for the collecting and disposing of this material can be determined upon, the board have sanctioned, from necessity, the old methods of collection and have permitted its disposal upon the Thurston farm, east of Miantonomi Hill, the drainage of which ultimately reaches the harbor. The inspector of nuisances has given permits for the emptying of 627 privy vaults and 60 cesspools. These average two loads each—or 1374 loads of polluted material to be disposed of. From a correspondence with other cities as to the methods employed for the collection of night soil, it has been found in a number that the odorless excavator system is used with complete satisfaction. In one of the smaller cities that has no system of sewerage, the odorless excavator system is employed for the removal of the contents of all vaults and cesspools. The city owns the necessary outfit and keeps it in repair. It is operated under the direction of the board of health, and the fees received, of one dollar per load, are sufficient to cover all expenses. A complete outfit of the odorless excavator apparatus, suitable for our city, would cost about \$1,400, in the possession of which Newport would have the most modern and best known sanitary means for the collection and removal of night soil. It can be operated without the slightest offence during the daytime.

Privy Vaults and Cesspools—One of the most baneful influences threatening the good health of a city is the existence of uncared for privies and cesspools. Excepting under special circumstances they should not be permitted within the closely inhabited districts, and, when permitted, they should have brick and cemented sides and bottom; in other words should be water tight. These receptacles of filth are breeders of ill health and the direct cause in many cases of death through their contamination of the air and the pollution of the soil. The ordinance passed during the year forbidding the construction of any new vaults or cesspools without permit from the board of aldermen should be rigidly enforced. By this means their character and location can be under supervision. The ordinance passed at the same time requiring all cesspools and privies to be connected with sewers on streets having a public sewer will be difficult to enforce. The passage of an ordinance, however, requiring the proper construction of all vaults and cesspools, old as well as new, wherever they are permitted, and the enforcing of the ordinance requiring them to be emptied at least twice a year, would practically fill the requirements.

City Water.

The following table exhibits the amount of water supplied to the city per month, with the total for the year and the amount used per capita daily:

January.....	34,851,842 gallons
February.....	29,368,584 "
March.....	31,110,442 "
April.....	29,516,234 "
May.....	35,630,316 "
June.....	46,858,875 "
July.....	53,265,849 "
August.....	60,686,473 "
September.....	53,743,095 "
October ..	53,012,328 "
November.....	34,329,684 "
December.....	38,312,524 "
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Total.....	500,686,246 gallons.

Based upon the estimated total population (20,000) the supply was equal to 68 gallons per capita daily, or, based upon the estimated population taking the water (15,000), the supply was equal to 91 gallons per capita daily.

The condition of our water supply has commanded marked attention from our citizens during the past year, and its quality has been seriously called into question.

The prolonged drought of the summer created a great scarcity of water, to such an extent that at no time in the history of the water supply has the depth of the water in the pond been so low. The shallow condition of the ponds concentrated the organic impurities in the water, and gave rise to increased turbidity and unpleasantness of the water.

In order to obtain positive knowledge as to the condition of the water and the state of sanitation on the water shed, a thorough investigation was urged by the board of health and sanctioned by your honorable body. Dr. T. M. Drown of the Institute of Technology in Boston, an expert in water sanitation, was engaged to make a thorough examination of the subject. Dr. Drown's elaborate report, which has been received, and already presented to your honorable body, fully justifies the call for an improved state of the water, and confirms the public impression that our city supply is contaminated by an excess of organic matter which imperils the health of our citizens and also calls for the adoption of suitable measures that will render the water more acceptable and wholesome. The report speaks so clearly and fully upon the subject that comment upon it is scarcely called for in this report. The necessity of pure water for the maintenance of good health in a community is now an accepted truism, and, while the relationship of cause and effect between contaminated water and disease, and especially death, is in many instances difficult to define, the fact is established that water holding an undue amount of organic matter or micro-organisms renders those who partake of it liable to a lowered state of vitality, brings about a mal-digestion and an impaired nutrition, and renders them less able to cope with diseases of all kinds; in other words, it takes away a certain power to resist disease. Every means therefore should be taken to protect the water, not only from pollution, but to remove by thorough filtration, as far as it is possible, all organic impurities in it. As already stated in a former report, the city has been neglectful in the past in the performance of its duty of protecting the water shed. By ordinances passed during 1891 two serious sources of pollution have been removed. Other changes pointed out in Dr. Drown's report are equally important, and the city must be held blamable until they obtain proper legislative power to remove these sources of danger. On the other hand the Water Works Company should establish a slower and more satisfactory filtration of the water and a thorough cleansing of the pond bottom and the deepening of the shallow portions, as recommended in Dr. Drown's report. With these changes little if any complaint will be found with the wholesomeness of our city supply.

The filter plant of the Newport Water Works Company is excellent in design, and will unquestionably remove the larger percentage of organic impurities from the water, by the proper admixture of alum and a slow process of filtration through moderately fine sand. The company should, however, not depend solely upon the filters as a means for giving potable water, but should use every effort to have the water as free from organic matter as is possible, by methods pointed out by Dr. Drown, before it passes through the filter.

FRANCIS H. RANKIN, M. D.,

Secretary of the Board of Health.

1. NEW SHOREHAM.
2. Health Officer, Thaddens A. Ball.
3. There has been no prevalence of consequence of contagious or infectious diseases in this town during 1891.
4. Isolation not called for.

6. Inspection of premises where sickness prevailed, not needed. One complaint of water closet, near Hotel Manisses, and found it unhealthy, and it was renovated.

7. I made sanitary inspections, during 1891, of fish houses and found them injurious to the health of the public, and in my judgment, should be removed before the fishing season commenced.

8. Locations in town that seem to be particularly unhealthy can be remedied at reasonable expense.

9. I make report to the town council of nuisances dangerous to the public health.

10. No disease of domestic animals has largely prevailed.

PROVIDENCE COUNTY.

1. BURRILLVILLE.

2. Health Officer, Peter McDermott, Jr.

3. No large prevalence of contagious or infectious diseases during 1891, excepting Typhoid Fever in the fall, and the "Grip" in December, which, while affecting many, was not particularly fatal here.

4. Isolation not needed.

6. Have found no unsanitary conditions here.

7. No regular inspection, but have kept a general outlook throughout the year.

8. No particularly unhealthy location known.

9. Have made no such report, but should instantly should I deem it necessary.

10. In regard to diseases of domestic animals during the year, there was tuberculosis only, in several localities in the town.

1. CRANSTON.

2. Health Officer, F. W. Bradbury, M. D., Superintendent of Health.

3. The following contagious and infectious diseases have prevailed in this town during 1891.

Diphtheria; Malignant; Cranston Print Works; number of cases, 50 to 75; deaths, 12, perhaps. Some of these cases occurred the last months of 1890, and some the spring of 1891 Whooping Cough; Auburn; 12 or 15 cases; no deaths; summer. Measles; Auburn; 12 cases; spring.

4. Isolation was attempted.

5. A small proportion only of the sick were effectually isolated.

6. Inspection of premises made where sickness prevailed. Sink drains and privies in *bad sanitary* condition; wells near privies; privies overflowing during rainstorms, in Cranston Print Works during the Diphtheria epidemic.

7. The above bad sanitary conditions were obvious in passing through the yards. The privy vaults were afterward cleaned.

8. One location in this town that seems to be particularly unhealthy to many

persons, that is, Cranston Print Works. Impure wells the cause, and can be removed at reasonable expense by introducing good water into place.

9. All nuisances are abated when known to exist.

10. No knowledge of any serious disease of domestic animals in town during the year.

NOTE.—No record was kept of many of the cases of Diphtheria occurring in Cranston Print Works, as many were town cases, and others had no physician. The privy vaults are made receptacles for swill by many of the families living there.

F. W. B.

1. * CUMBERLAND.

2. Health Officer, T. J. Smith, M. D.

3. Typhoid Fever; Valley Falls; 61 cases; 3 deaths; June, July and August.

4. Isolation was not maintained or attempted.

6. Inspection of premises was made where sickness prevailed, and found in bad condition. The cause of the disease due to impure drinking water taken from a well in the neighborhood. 22 privy vaults and cesspools within 50 feet of well. Inspection of premises ordered by town council, and sanitary conditions improved and well closed up by order of health officer.

7. Yes, by order of town council as above. Also had ice, cut from the Blackstone River, analyzed, which proved to be unsafe to use for domestic purposes. From the use of this ice, is, in my opinion, largely due the increase of diarrhoeal diseases in Berkeley, Lonsdale and Valley Falls.

8. There are locations in this town that seem to be particularly unhealthy, and the cause can be removed largely at reasonable expense.

9. I make report to the town council of nuisances dangerous to the public health.

10. No serious disease of domestic animals has prevailed to my knowledge during the year.

1. EAST PROVIDENCE.

2. Health officer, Mason B. Wood.

3. Some prevalence of contagious or infectious diseases in this town during 1891.

Typhoid fever; large number; September, October, November. Whooping cough; large number; all the year.

4. Isolation was maintained. Children in 14 families; 7 scarlet fever, 7 diphtheria.

5. Not all the sick were isolated.

6. Inspected 14 cesspools and 4 privies on account of being over-full, and also offensive deposits of stores, fish markets, clam houses, etc.

7. Sanitary inspections during 1891 from my own option.

8. No location in this town that seems to be particularly unhealthy.

9. All nuisances dangerous to the public health reported.

1. GLOCESTER.

2. Health officer, Job Owen.

3. We have had several contagious diseases in town this year, such as influenza, or more commonly called, La Grippe. It was all over the town, seemingly no more in one place than another. Number of cases not known. Two deaths reported in October and one in December. There were several cases of diphtheria in Chepachet. One family of six or seven children all had it. One died. No other cases in the neighborhood. Three other deaths reported for the year. One occurred in February, one in April, one in March and one in July. Measles were quite prevalent in the southerly part of the town, including Harmony. Mumps were very general in Chepachet, and extended to other localities, so much so, none escaped that never had them, neither old or young. Number of cases of measles and mumps not known. No deaths reported.

4. Isolation maintained in some cases.

5. Small proportion of the sick isolated.

6. No inspection of premises made where sickness prevailed as to the sanitary condition of the premises.

7. I made no sanitary inspection by order of the town council but from my own option. I had several complaints about privy vaults, cesspools and sink drains being neglected. Upon examination I found them offensive. I called upon the owners of the property and they all put their premises in sanitary condition satisfactory to the complainants except one. His case I laid before the town council and they gave him two days to complete his cesspool and abate the nuisance complained of.

8. I know of no place particularly unhealthy.

9. I report to the town council nuisances dangerous to the public health when known.

10. I have no knowledge of any serious diseases of domestic animals.

1. NORTH PROVIDENCE. JOHNSTON.

2. Health officer, Charles A. Barnard, M. D.

3. Whooping cough; North Providence, Smithfield; 50 cases; one death; all the year. Typhoid; North Providence; 20 cases; November, December. La Grippe; everywhere; 200 cases; December.

In Johnston, all the above, with usual amount of diphtheria, scarlet fever, mostly in the eastern section.

4. Isolation was not maintained except in some particularly contagious diseases.

6. An inspection of premises always made in my cases; no cause discovered.

7. Many sanitary inspections made during 1891. The town of Johnston is kept under constant surveillance by board of health.

8. Do not know of any location in town that seems to be particularly unhealthy.

9. Board of health have power to abate nuisances.

10. No serious disease of domestic animals has prevailed.

1. LINCOLN.

2. Health Officer, N. Malo.

3. Do not know of any large prevalence of contagious or infectious diseases in town during 1891, except as below.

La Grippe; Lincoln; most general; 9 deaths; December.

4. No isolation was maintained.

6. No inspection of premises made where sickness prevailed as to the sanitary condition of the premises. Not having had any other epidemics than the one referred to above no inspection was deemed necessary.

7. Some sanitary inspections made during 1891. Some general nuisances which through the reports I made were ordered abated by the council.

8. No location in town that seems to be particularly unhealthy.

9. Reports are made to the town council of nuisances dangerous to the public health.

10. No disease of domestic animals has prevailed.

1. NORTH PROVIDENCE.

2. Health Officer, Sanford C. Kinnecom.

3. Do not know of any large prevalence of contagious or infectious diseases in town during 1891.

7. Sanitary inspections were made during 1891, by order of the town council and from my own option. Inspected the premises of the Lymansville Manufacturing Company, found cesspools and privies in unsanitary condition, at Centerdale Manufacturing Company, privies in unsanitary condition, at Allendale Manufacturing Company, privies in unsanitary condition, at Rodney Dyer's farm on Fruit Hill, cesspool in unsanitary condition, all ordered abated by council.

8. No particularly unhealthy locality.

9. I report to the town council nuisances dangerous to the public health soon as known.

10. No serious disease of domestic animals has prevailed.

1. NORTH SMITHFIELD.

2. Health Officer, John B. Green.

3. No large prevalence of contagious or infectious diseases in town during 1891.

Infectious disease; Slatersville; 5 cases; 2 deaths; October.

4. Isolation was maintained.

5. All of the sick were isolated.

6. Inspection of premises was made where sickness prevailed. Cesspools and privy vaults were in a bad condition, also one well, I had them cleaned.

7. Sanitary inspections were made by request of the doctor in attendance.

8. No location in town particularly unhealthy to any large number of persons.

9. I report to the town council nuisances dangerous to the public health.

10. No serious disease of domestic animals.

PAWTUCKET. No Report. See pages 36 and 70.

1. PROVIDENCE CITY.

2. Superintendent of Health, Charles V. Chapin, M. D.

3. Question 3 and all other inquiries in Circular No. 132 are fully covered by the following extracts from the Report of the Superintendent of Health for 1891:

"The number of deaths reported during the year was 2,630, which was 247 less than in the preceding year. The estimated population in 1891 was 135,000, and the death rate, based upon this, was 19.48. With the exception of epidemic influenza, the year 1891 was an uncommonly healthy one, and up to the middle of December the death rate was less than it had been for twenty years, and even including the results of influenza during that month the death rate of 19.48 was the smallest since 1885, and was .24 less than the average for the previous 36 years, and 2.29 less than for the preceding year.

There were 231 deaths from diarrhoeal diseases in 1891. This was 81 less than in the preceding year. The 231 deaths were 8.78 per cent. of the total deaths, which is much less than the average for 36 years.

There were in 1891 eight deaths from malarial diseases, which is less than in any year since 1883. This is doubtless a fair indication of the decrease of this disease. In 1890 there were 23 deaths.

There were 344 deaths from phthisis, which was less than last year and less than the average for 36 years.

* * * * *

CONTAGIOUS DISEASES.

The diseases referred to in this connection are measles, whooping cough, scarlet fever, typhoid fever and diphtheria.

There were only four deaths from measles in 1891.

Whooping cough caused 53 deaths in 1891. This is coming to be recognized more and more as a serious disease and shows little of the tendency to diminish which of late has been exhibited by scarlet fever and diphtheria.

The number of deaths from scarlet fever in 1891 was 17.

There were 62 deaths from typhoid fever, or 2.35 per cent. of the deaths from all causes.

Diphtheria caused 48 deaths, which is less than in any year since 1885, and was 1.82 per cent. of the deaths from all causes.

Cases of scarlet fever, typhoid fever and diphtheria are reported to this office by the attending physicians, who are by law required to make these reports without compensation. The faithfulness and care with which this is done by almost all speaks highly for their interest in their profession and the public welfare.

* * * * *

When cases of contagious disease are visited by the medical inspector, the

premises are usually examined by him with reference to unsanitary conditions. In the finer residences, however, particularly when the owner of the house is its occupant, the inspection is omitted unless requested. The results of these examinations, as presented in my last report, seemed to indicate that there was no causative relation between unsanitary conditions, as ordinarily understood, and scarlet fever, diphtheria and typhoid fever. The figures for 1891, as shown in the following tables, differ in no marked respect from those of preceding years, and seem to strengthen my conclusion as above stated.

The following tables show the results of these inspections for the last seven years:

RESULTS OF THE EXAMINATIONS OF PREMISES IN CASES OF CONTAGIOUS DISEASES.

Scarlet Fever.

YEAR.	Vaults Full.	Cesspools Full.	Yards Filthy.	Untrapped Sinks.	Defective waste pipes and drains.	Filthy Cellars.	No Nuisance.	Total.
1885.....	23	11	14	113	56	20	32	269
1886.....	16	4	4	101	61	4	45	235
1887.....	70	9	14	232	88	5	247	665
1888.....	14	3	9	42	34	3	128	233
1889.....	4	4	.....	42	9	.....	51	110
1890.....	4	2	.....	19	4	.....	56	85
1891.....	14	3	3	57	17	2	157	253
Total.....	145	36	44	606	269	34	716	1,850

Diphtheria.

YEAR.	Vaults Full.	Cesspools Full.	Yards Filthy.	Untrapped Sinks.	Defective waste pipes and drains.	Filthy Cellars.	No Nuisance.	Total.
1885.....	8	3	4	33	20	4	28	100
1886.....	24	4	3	97	55	2	86	271
1887.....	25	5	2	112	49	4	87	284
1888.....	20	2	7	80	32	4	92	237
1889.....	16	7	4	68	27	6	89	217
1890.....	17	1	3	52	28	.....	102	203
1891.....	10	3	5	42	10	2	81	153
Total.....	120	35	28	484	221	22	555	1,465

Typhoid Fever.

YEAR.	Vaults Full.	Cesspools Full.	Yards Filthy.	Untrapped Sinks.	Defective waste pipes and drains.	Filthy Cellars.	No Nuisance.	Total.
1885.....	10	3	5	39	28	3	12	100
1886.....	25	3	6	57	32	4	26	153
1887.....	10	1	2	27	9	1	21	71
1888.....	29	9	11	163	51	13	154	430
1889.....	9	3	1	61	21	3	96	194
1890.....	13	5	.....	27	11	.....	46	102
1891.....	11	1	6	46	20	.....	111	195
Total.....	107	25	31	420	172	24	466	1,245

The Rhode Island Hospital now receives patients suffering with contagious diseases, provided pay for the same at the rate of \$15 per week is assured. I believe that in a large proportion of cases the best and indeed the only satisfactory method of isolation is removal to the Hospital, and in order to encourage such removal I have recommended that in all cases in which the parents are too poor to pay for the board of the child at the Hospital the expense be borne by the city. It is, however, only exceptionally that parents can be induced to

allow of this removal, and during the year only ten cases were removed to the Hospital under my direction, four of scarlet fever and six of diphtheria, and the total expense to the city in caring for them was \$486 43. I know of no expenditure of this department which has given a better return; for certainly many cases of disease were thus prevented. In three cases of diphtheria where intubation was successfully performed at the Hospital only with great difficulty, there is little doubt that the patients would have died under their unfavorable home surroundings. The uncomfortable wagon used to transport these patients was even more unsightly than it was uncomfortable, owing to its having been subjected so often to steam disinfection. The new ambulance will be ready early in the coming year, and will be so constructed that it can be readily kept free from contagion without subjecting it to the action of steam.

* * * * *

SCARLET FEVER.

The following table gives the results of my observations during the past five years concerning certain points in the etiology and prevention of scarlet fever. This table does not include all the families and cases, as some pass from observation through removals or otherwise. But a large proportion and a fair average are represented:

	1887.	1888.	1889.	1890.	1891.	Total.
Number of families in which there was more than one susceptible child.....	232	244	73	66	198	813
Number of these in which there was a second case.....	130	147	30	27	78	412
Number of susceptible children in all the above families	986	827	242	215	605	2,875
Number of these children who were attacked.....	452	511	126	105	341	1,508
Number of additional families with susceptible children in the house where the disease appeared	112	128	18	15	98	371
Number of susceptible children in these families.	381	354	34	30	238	1,037
Number of these additional families attacked.....	27	16	0	2	10	55
Number of children in these families attacked ...	58	21	0	2	12	93
Number of families where inoculation was practiced	87	99	36	38	124	384
Number of instances in the above families where the disease spread beyond the first case.....	44	64	12	15	46	181
Number of susceptible children in these families.	218	496	191	132	382	1,419
Number of these children who were attacked.....	148	319	56	65	198	786
Number of tenements disinfected where there were other families with susceptible children in the house	49	56	10	4	20	139
Number of the above where the disease spread to other families in the house.....	5	5	0	0	2	12
Number of instances where susceptible children were at once removed.....	24	18	10	9	27	88
Number of instances where they were attacked on their return.....	3	1	0	0	0	4

It will be noticed that the figures do not differ much from year to year, and that inferences drawn from any particular year apply equally well to all years and to the total.

That this disease spreads solely by contagion I have no doubt, and I also believe, and share this opinion with almost all health officers, that schools are a very common avenue for its dissemination. At one public school in this city a child was in attendance while desquamating, as the result of mistaken diagnosis on the part of the attending physician. Several cases appeared in the school, and many more would probably have resulted if the teacher had not suspected what the trouble was and called my attention to it, so that the child was excluded until complete recovery.

As an instance of failure to infect during the early stages, a case came to my knowledge where a boy with a typical sore throat attended a Sunday school festival without a single other case resulting. He afterwards passed through the other stages of the disease in a perfectly normal manner.

* * * * *

TYPHOID FEVER.

There was considerable increase in the number of cases and the number of deaths from typhoid fever in 1891, there being nearly double the number of cases, and twenty-one more deaths than in the preceding year. This number, however, was not very excessive as compared with many years; nevertheless it was more than the average since the introduction of Pawtuxet water, except in those years in which we had epidemics due to specific pollution of that stream. When an increase was noted in the number of cases reported to me, during the month of October, I, of course, feared that the public water supply might be again at fault. A thorough inspection was made of the river to determine whether any traces of specific contamination with typhoid stools could be obtained. There did not seem to be any evidence that such was the case.

As I stated in my last report we can always expect a certain number of cases of typhoid fever in the city, due to other causes than the pollution of the public water supply, and the nature of which are there explained. We can expect a variation in the number of such cases from year to year, but it ought never to be excessive. I do not think that the number which occurred in 1891 was greater than might be expected from such local causes. I am informed by the Secretary of the State Board of Health that there was a rather smaller number of deaths than usual from typhoid in the State at large, with the exception of Providence and the valley of the Pawtuxet, where there was rather more than usual.

DISINFECTION.

Disinfection after contagious diseases in the city is not compulsory, and is only done at the request of the family. It is done by this department without charge. The disinfections in 1888 numbered 180; in 1889 there were 92; in 1890, 95, and in 1891 there were 132. Of these, 94 were for scarlet fever and 38 for diphtheria.

VACCINATION.

During the year 1891 the number of persons vaccinated was 1,738. The only public vaccination has been at the City Hall, on Saturday afternoons. Humanized virus only is employed. The number of certificates of vaccination issued was 2,112.

SWILL.

During the year the swill has been collected under contract dated April 18, 1889. This contract is for five years, from May 1, 1889. The payment for the service is 15½ cents per annum for each person in the city, the population of the city to be estimated for that purpose each year by the City Registrar. At this rate they were paid \$1,679.16, each month to May 1, 1891, and \$1,756.66, per month since that date. The contractors continue to collect the swill in the same satisfactory manner in which they undertook the work. They employ in the business sixteen two-horse teams, and one three-horse team.

NIGHT SOIL.

The number of licenses granted during the past eight years was as follows:

1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
165	168	145	157	117	119	116	111

The character of the parties who do this work is growing worse each year, and the complaints of citizens more numerous. The time has come when some change should be made. Either the work should be done by the city or else one, or, at most, only a limited number of licenses issued to responsible parties. The night soil should all be delivered at one or two fixed points where the least nuisance would arise, and be carried out of the city on the cars or in barges. The price of the work should be fixed by law and an officer be detailed to record the amount delivered each day at the dumping stations.

NUISANCES.

During the year 392 complaints were made at this office. Of these 316 were well founded, while 76 were not. In addition to these complaints 120 were received through the police, making 572 complaints received from the public during the year. Many of these, however, had already received attention when the formal report reached this office. The nuisances abated during the year were as follows:

Privy vaults full and offensive.....	1,280
Cesspools full and offensive.....	161
Defective vaults and cesspools.....	75
Uncovered vaults and cesspools.....	37
Cesspools and vaults leaking on to adjoining estates.....	23
No vault to privy....	3
No cesspool on estate..	10

Cesspools and vaults leaking into cellar.....	40
Defective waste and drain pipes.....	241
No traps.....	136
Filthy yards.....	528
Filthy water flowing into the street.....	22
Defective water closets.....	15
Filthy cellars.....	47
Privy vaults removed.....	66
New privy vaults and cesspools built.....	7
Filthy tenements.....	6

When a nuisance exists on any premises in the city a letter is at once sent to the owner to abate it, and if he does not do it within a reasonable time the case is reported to the Board of Aldermen for action. In 1891 your board issued 272 orders to abate nuisances, and 1 order to vacate tenements; 80 citing persons to appear before the board, and 41 ordering persons to connect drainage with the sewer. When your board is not in session I have authority, under Chapter 495 of the Public Statutes, to issue orders to abate certain nuisances, and during the year 47 were issued from this office.

WATER SUPPLY.

The public water supply of the city of Providence still remains in a very unsatisfactory condition. It is true that not quite so much human feces gets into the river as has at certain times in the past, but it is also true that a considerable amount is discharged daily into the Pawtuxet river, and that the citizens of this city are obliged to drink it in the water which is sold them by the municipal government. Over and above any merely æsthetic considerations, which do not fall within the province of this department, it is certain that the health of our citizens is endangered, and seriously endangered, by drinking human feces. It has been demonstrated time and again, both in this country and in Europe, that the contamination of a public water supply by the dejections of typhoid patients has resulted in the production of that disease in many of the persons who drank the water. This was shown most conclusively to have been the case in this city in 1888, and there is little doubt that the same thing happened in 1882 and 1883. Just so long as human excrement finds its way into the river, just so long is the water liable to be contaminated in a fatal manner with the specific poison of typhoid fever. If one of the hundreds of persons whose excrement pollutes the Pawtuxet river each day happens to have typhoid fever, those who drink the water in this city are liable to have it, and probably more or less of them will have it, according to the amount of fecal matter discharged into the water and the volume of the river at that time. No one appreciates more than I do the value of chemical analysis in the examination of potable waters. It is wise beyond all question to obtain all the scientific knowledge possible on such a subject from every point of view. Nevertheless, in regard to this particular public water supply we can take a stand above and independent of any chemical or biological analysis. Even if analysis should show that the Pawtuxet water is to-day chemically pure and free from micro-

organisms, yet, if I know that human feces will fall into it to-morrow, I should say emphatically that it is unsafe to drink it.

PAWTUXET WATER ANALYSES FOR 1891.

The following analyses of the Pawtuxet water were made by Prof. John H. Appleton, of Brown University.

Two analyses were made each month

The figures signify parts (in weight) in one million parts of water (in weight).

MONTH	Total. Residue.	Mineral Matter.	Organic and Volatile Matter.	Common Salt.	Albuminoid Ammonia.	Ammonia.
January.....	39 28	24 12	15 16	4.52 2.71	18 20	.02 .02
February.....	31 32	11 21	20 11	2.37 2.96	22 14	.02 .02
March.....	34 25	23 15	11 10	1.79 2.07	12 12	.02 .02
April.....	29 32	17 18	12 14	3.26 2.96	16 20	.04 .06
May.....	33 39	20 23	13 16	3.26 3.85	20 26	.02 .02
June.....	37 47	23 28	14 19	3.85 3.45	24 18	.06 .14
July.....	45 37	23 19	22 18	3.56 3.96	26 24	.04 .04
August.....	42 56	20 25	22 31	4.15 4.15	24 22	.08 .02
September.....	49 107	25 74	24 33	3.85 4.74	24 30	.06 .06
October.....	95 72	67 49	24 23	6.22 5.63	38 28	.02 .02
November.....	93 80	68 56	25 24	6.52 5.93	31 32	.04 .08
December.....	83 64	60 45	23 19	5.34 4.74	23 20	.02 .01

AVERAGE FOR SIXTEEN YEARS.

The figures signify parts (in weight) in one million parts of water (in weight).

YEARS.	Total Residue.	Mineral Matter.	Organic and Volatile Matter.		Common Salt.		Albuminoid Ammonia.		Ammonia.	
	Average.	Average.	Average.	Maximum.	Average.	Maximum.	Average.	Maximum.	Average.	Maximum.
1876.....	50	30	20	30	5.72	8.50	.24	.40	.06	.11
1877.....	43	24	19	24	5.46	7.00	.23	.32	.06	.12
1878.....	37	21	16	24	5.47	8.51	.17	.25	.04	.10
1879.....	38	24	14	24	5.73	10.83	.17	.23	.05	.10
1880.....	45	29	16	22	6.35	8.76	.22	.26	.02	.14
1881.....	41	26	15	21	4.65	8.07	.21	.28	.02	.05
1882.....	43	27	16	25	4.43	6.60	.25	.38	.03	.08
1883.....	47	30	17	24	4.60	7.95	.27	.36	.04	.14
1884.....	45	29	16	29	4.79	7.33	.19	.32	.04	.14
1885.....	46	30	16	24	4.20	6.74	.22	.30	.05	.20
1886.....	46	29	17	25	4.14	5.95	.22	.30	.05	.14
1887.....	42	24	17	25	4.15	6.84	.21	.36	.04	.10
1888.....	40	23	17	30	3.50	5.62	.19	.30	.05	.14
1889.....	38	22	17	27	2.86	4.99	.21	.30	.04	.10
1890.....	41	23	16	25	3.62	5.30	.24	.36	.04	.12
1891.....	43	27	17	....	4.62	....	.22	...	.04	....
Average..	43.4	24.4	15.5	....	4.34	....	.20	....	.04	....

1. WOONSOCKET. No report from the health officer. See pages 40 and 73.

WASHINGTON COUNTY.

1. CHARLESTOWN.
2. Health officer, A. A. Saunders, M. D.
3. No epidemics or any large prevalence of contagious or infectious diseases in town during 1891 except the epidemic Influenza.
Influenza; general; 300 cases; November and December.
4. Isolation was maintained in contagious diseases when necessary.

6. No needed inspection of premises where sickness prevailed.
7. No unusual sanitary inspections made during 1891.
8. No particularly unhealthy location known.
9. Reports to the town council of nuisances dangerous to the public health are promptly made.

10. No serious disease of domestic animals has largely prevailed.

1. HOPKINTON.

2. Health officer, L. M. Barber.

3. No large prevalence of contagious or infectious diseases in this town during 1891 except La Grippe, which has been generally prevalent through the town.

6. No inspection of premises made where sickness prevailed.

7. Some sanitary inspections during 1891. Sink drains leaking into cellars and others.

8. No location in town that seems to be particularly unhealthy to my knowledge.

9. Reports are promptly made to the town council of nuisances dangerous to the public health.

10. No serious disease of domestic animals has largely prevailed.

1. NORTH KINGSTOWN.

2. Health officer, Lance de Jough.

3. No epidemics or any large prevalence of contagious or infectious diseases in this town during 1891 except La Grippe.

4. No isolation maintained to my knowledge.

6. No inspection of premises made where sickness prevailed, as there have only been one or two sporadic cases of typhoid.

7. Made inspections of places called to my notice and had them abated.

8. One location in town that seems to be unhealthy to some persons in centre of village of Wickford, owing to cesspools and privies being near together.

9. All nuisances dangerous to the public health are promptly reported.

10. No disease of domestic animals has largely prevailed during the year.

1. SOUTH KINGSTOWN.

2. Health officer, Walter S. Watson.

3. Within my knowledge no epidemics or any large prevalence of contagious or infectious diseases in this town during 1891.

6. No inspection of premises made or seemed to be needed where sickness prevailed as to the sanitary condition of the premises.

7. No sanitary inspections during 1891 by order of the town council or from my own option.

8. No location particularly unhealthy known to me.

9. When known I report to the town council nuisances dangerous to the public health.

10. As to any serious disease of domestic animals in this town during the year I know of only one case and that was at Narragansett Pier, and the animal was killed.

1. WESTERLY.

2. Health officer, J. M. Pendleton.

3. In reply, can say in regard to epidemics or large prevalence of contagious or infectious diseases in this town during 1891, that I took charge of the office July 1st, last. There has been considerable scarlet fever but not an epidemic. I believe that it has all come from former carelessness. The town needs education in the care of these diseases. My predecessor was misjudged in his efforts to perform this, and I suppose I shall be, as there is lack of proper coöperation among the physicians, in part due to petty jealousy. The health of the town has been very good, and disease has been so scattered that there is no indication of local troubles. There has been only one family affected since November last.

4. Isolation was maintained.

5. All of the sick with contagious diseases were isolated.

6. Inspection of premises was made where sickness prevailed. I have caused several Italian and Irish settlements to be cleaned to prevent but not to stop disease.

7. From my own option a general inspection of outhouses in spring and summer were made.

8. No location in town that seemed to be particularly unhealthy except as above.

9. Reports are made to the town council of nuisances dangerous to the public health as soon as known.

10. No serious disease of domestic animals has largely prevailed. One or two cases of tuberculosis.

COMPARATIVE PREVALENCE

OF TWELVE IMPORTANT ACUTE DISEASES IN THE TOWNS.

For the purpose of the comparison of any one year with other years, the following Tables will present the varying degrees of the prevalence of twelve acute diseases of importance, as causes of death during the eight years, 1884-1891.

In these Tables the appearance of the most important of the common contagious or infectious diseases, with a few others not contagious, may be found as they occurred in the different towns, with different degrees of prevalence from year to year.

The *mortality* from that class of diseases styled zymotic, approximately corresponds, in a majority of instances, with the relative extent of the prevalence or *number* of such diseases.

A fair estimate, therefore, of the whole number of cases of each of such diseases, occurring in each county and in the whole State during each of the years represented, may be made by reference to the number of deaths of each in the alphabetical classification of diseases, Tables VII and VIII, and in the percentage table of mortality therefrom, Table IX, in the Registration Reports for those years.

TABLE I.

Comparative Prevalence of Twelve Important Acute Diseases during 1884.

TOWNS.	Bronchitis.	Cholera Infantum.	Croup.	Diphtheria.	Diarrhea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	=	=	=	0	=	—	+	—	+	=	0	—
Bristol.....	=	—	—	0	—	+	—	0	—	—	—	—
Warren.....	=	=	—	0	=	=	=	+	+	+	0	+
Coventry.....	=	=	—	=	+	—	..	—	+	+	—	..
East Greenwich.....	=	=	—	—	=	—	—	0	=	=	=	=
West Greenwich.....	=	—	=	..	—	—	0	0	=	+	=	—
Warwick.....	+	=	+	—	—	—	=	*	=	=	..	—
Jamestown.....	=	—	0	0	—	—	0	0	—	—	0	—
Little Compton.....	—	—	0	..	—	=	0	*	—	—	0	=
Middletown.....	=	—	0	..	—	=	0	—	=	0	=	—
New Shoreham.....	—	—	0	—	—	+	0	*	—	—	0	0
Portsmouth.....	=	—	0	0	—	—	0	0	—	—	—	..
Tiverton.....	=	—	0	..	—	—	0	—	=	=	—	..
Newport City.....	=	—	—	=	..	—	=	=	+	+
Burrillville.....	—	—	—	=	=	*	0	0	+	=	+	0
Cranston.....	=	=	—	—	—	=	+	—	=	+	=	—
Cumberland.....	+	—	+	+	—	—	*	..	—	—	=	*
East Providence....	=	=	—	=	—	+	=	—	+	+	=	—
Foster.....	—	—	—	—	..	+	=	=	0	..
Glocester.....	—	—	..	=	=	=	0	0	+	=	=	0
Johnston.....	=	+	—	—	—	=	+	—	=	=	+	—
Lincoln.....	=	=	—	=	=	—	+	..	—	—	=	=
North Providence....	=	—	..	=	—	=	+	—	+	+	—	0
North Smithfield....	=	=	—	..	=	=	=	0	=	+	—	0
Pawtucket.....	=	—	+	+	=	=	+	+	—	—	+	=
Scituate.....	=	=	—	—	—	=	+	—	+	+	+	0
Smithfield.....	=	=	—	—	=	=	+	0	=	+	=	..
Woonsocket.....	=	=	—	..	=	+	+	0	=	+	+	0
Providence City.....	=	+	=	=	—	—	=	=	+	+	+	=
Charlestown.....	=	—	..	—	+	—	—	0	—	—	..	+
Exeter.....	=	—	—	—	0	0	—	+	—	0
Hopkinton.....	=	—	..	—	=	=	—	0	—	=	—	+
North Kingstown....	=	=	—	—	=	=	—	0	—	=	=	0
South Kingstown....	=	=	—	..	=	=	..	0	+	+	—	0
Richmond.....	=	—	..	—	+	=	—	0	—	=	..	*
Westerly.....	=	..	—	..	=	—	=	0	+	=	*	+

The signs or characters used in the above table indicate the degrees of prevalence of the diseases named, as follows: The * indicates an epidemic prevalence; the sign + a large prevalence; the sign = a moderate prevalence; the sign — a small prevalence; the dots a very small prevalence; and the 0 no prevalence, according to the returns.

TABLE II.

Comparative Prevalence of Twelve Important Acute Diseases during 1885.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhoea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	=	—	—	..	—	=	+	0	=	=	..	—
Bristol.....	+	—	—	+	+	=	0	—	—	=	—	=
Warren.....	=	—	..	—	=	=	=	0	+	=	—	—
Coventry.....	—	..	=	+	+	..	—	*	..	+	—	+
East Greenwich.....	=	+	—	—	+	—	—	0	=	=	..	..
West Greenwich.....	—	—	—	=	+	—	..	—	..	=	..	—
Warwick.....	=	—	=	=	=	=	=	=	=	+	..	=
Jamestown.....	=	=	—	0	0	=	=	..	0
Little Compton.....	+	+	—	0	=	=	—	+	+	=	0	+
Middletown.....	+	—	—	=	=	—	..	0	=	=	0	0
New Shoreham.....	=	..	0	—	=	=	0	0	0	=	..	..
Portsmouth.....	=	..	—	=	=	—	=	=	..	0
Tiverton.....	+	=	—	..	=	=	0	+	=	—	0	=
Newport City.....	+	—	—	=	=	—	..	0	+	=	—	0
Burrillville.....	=	—	0	—	—	—	..	*	=	—	0	*
Cranston.....	=	—	=	=	=	=	+	—	+	=	—	..
Cumberland.....	=	=	=	..	—	=	+	0	—	=	..	..
East Providence...	=	=	+	+	—	=	—	0	—	—	—	+
Foster.....	=	—	=	..	0	—	=	=	0	=
Gloicester..	+	0	0	0	—	=	0	—	+	=	0	*
Johnston.....	=	—	+	+	=	=	+	—	+	=	—	..
Lincoln.....	=	=	=	..	=	=	+	0	—	=	..	—
North Providence...	=	—	—	=	=	=	=	—	+	+	—	..
North Smithfield...	=	—	—	—	=	=	—	=	=	—	..	+
Pawtucket.....	+	=	—	=	—	—	+	+	=	=	+	..
Scituate.....	—	=	0	+	=	=	—	0	—	=	0	0
Smithfield.....	+	—	..	=	—	=	—	0	—	=	..	..
Woonsocket.....	=	=	=	=	=	=	+	—	=	—	..	*
Providence City.....	+	=	=	=	=	—	=	=	+	=	=	+
Charlestown.....	+	0	..	—	—	—	=	=	=	=	=	—
Exeter.....	=	—	—	—	0	0	=	—	..	..
Hopkinton.....	=	—	—	—	=	—	—	0	—	—	..	..
North Kingstown...	=	=	—	=	=	=	—	..	—	—	..	0
South Kingstown...	=	=	—	—	—	—	—	0	=	—	—	..
Richmond.....	=	—	—	—	=	—	..	0	=	=	..	..
Westerly.....	=	—	=	=	=	..	=	=	*	..

For explanation of signs or characters, see foot-note of Table I.

TABLE III.

Comparative Prevalence of Twelve Important Acute Diseases during 1886.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhoea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	+	—	—	—	—	—	—	—	—	—	..	—
Bristol.....	—	—	—	+	—	—	—	0	—	+	0	—
Warren.....	—	—	—	—	—	—	—	—	+	—	—	—
Coventry.....	+	—	—	—	—	—	+	..	—	+	—	—
East Greenwich.....	—	—	—	—	—	—	—	0	—	—	+	—
West Greenwich.....	—	—	—	—	—	—	—	+	..	—
Warwick.....	—	—	—	—	—	—	+	+	—	—	+	+
Jamestown.....	—	—	—	..	—	—	0	..	—	—	0	0
Little Compton.....	—	0	0	0	—	—	0	0
Middletown.....	—	—	—	—	—	—	0	..	—	—	0	0
New Shoreham.....	—	—	0	0	—	0	0	0	..	..	0	0
Portsmouth.....	—	—	0	—	—	—	0	0	—	—	0	0
Tiverton.....	..	—	0	—	..	0	0	..	—	—	0	0
Newport City.....	—	—	—	—	—	—	0	..	—	—	..	—
Burrillville.....	—	—	—	—	—	..	0	0	—	—	0	*
Cranston.....	+	—	—	—	+	—	+	—	+	—	—	—
Cumberland.....	—	—	0	—	—	..	*	0	—	—	—	—
East Providence..	+	—	—	—	..	—	*	..	—	—	—	—
Foster.....	—	—	—	—	—	—	..	0	—	—	0	0
Glocester.....	—	0	0	—	—	0	..	0	—	—	0	*
Johnston.....	+	—	—	—	+	—	+	—	+	—	—	+
Lincoln.....	—	—	..	+	—	..	+	0	—	—	—	—
North Providence..	—	—	—	—	—	—	—	..	—	—	—	—
North Smithfield...	—	—	—	—	—	—	—	..	—	—
Pawtucket.....	—	+	—	—	—	—	+	..	—	—	—	—
Scituate.....	—	—	—	..	—	—	+	*	+	—	0	*
Smithfield.....	—	—	—	—	—	—	—	—	—	—	0	..
Woonsocket.....	+	+	—	—	—	—	+	—	—	—	—	..
Providence City.....	+	—	—	+	—	—	—	+	+	—	—	+
Charlestown.....	—	..	—	—	+	0	—	+	..	—
Exeter.....	+	—	—	0	*	—	+	0	..
Hopkinton.....	+	—	+	—	—	+	+	+	0	..
North Kingstown....	—	—	—	—	—	—	..	0	—	—	—	..
South Kingstown....	—	—	+	0	—	—	+	*
Richmond.....	+	..	—	—	+	—	..	—	—	+	..	—
Westerly.....	—	—	—	..	+	—	—	0	—	+	—	+


 For explanation of signs or characters, see foot-note of Table I.

TABLE IV.

Comparative Prevalence of Twelve Important Acute Diseases during 1887.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	—	=	=	+	≡	—	≡	—	≡	≡	≡	0
Bristol.....	—	—	≡	—	—	—	≡	≡	+	..
Warren.....	≡	≡	≡	+	—	..	—	—	—	+	—	0
Coventry.....	—	—	—	≡	—	..	—	≡	—	—	*	..
East Greenwich.....	—	—	—	—	+	≡	≡	—	—	..
West Greenwich.....	—	—	..	0	—	—	≡	—	..
Warwick.....	+	—	≡	+	+	*	—	+	*	*
Jamestown.....	≡	—	—	—	—	0	—	—	—	..
Little Compton.....	—	..	—	—	0	—	≡	≡	0	0
Middletown.....	—	—	..	0	≡	—	—	..	—
New Shoreham	—	—	—	—	0	0	≡	≡	0	0
Portsmouth.....	—	—	—	—	0	≡	0	—	≡	≡	0	0
Tiverton.....	—	—	—	≡	0	≡	0	—	≡	≡	0	0
Newport City.....	≡	—	..	—	—	—	0	+	≡	≡	—	≡
Burrillville.....	—	—	—	—	0	—	—	0	0
Cranston.....	—	—	—	..	—	..	+	—	—	—	+	—
Cumberland.....	..	≡	≡	*	—	—	+	—	..
East Providence....	—	—	—	+	≡	..	≡	..	+	—	+	0
Foster.....	—	—	—	+	—	—	*	—	—	0
Glocester.....	—	0	..	..	≡	—	≡	0	—	—	0	0
Johnston.....	+	≡	—	≡	+	—	+	+	+	+	+	—
Lincoln.....	—	—	≡	*	+	≡
North Providence ..	≡	≡	≡	≡	—	—	≡	..	+	≡	+	—
North Smithfield	+	..	—	+	—	≡	≡	+	..
Pawtucket.....	≡	—	—	+	—	..	—	..	≡	+
Scituate.....	—	—	..	—	≡	+	+	—	—	+
Smithfield.....	≡	—	..	—	—	..	+	—	≡	≡	—	0
Woonsocket.....	≡	—	—	≡	—	—	—	—	≡	≡	*	..
Providence City.....	+	≡	≡	+	≡	—	+	*	+	≡	*	≡
Charlestown.....	—	0	≡	*	≡	..	..	..	—	≡	0	..
Exeter.....	0	0	+	..	..	0	0	0	0	0
Hopkinton.....	≡	..	≡	≡	≡	≡	≡	+	—	..
North Kingstown...	0	≡	+	—	—	0	0	0	..	0
South Kingstown...	—	—	0	..	≡	—	..	*	—	—	0	0
Richmond.....	—	0	+	*	≡	..	..	—	—	—	0	..
Westerly.....	+	≡	≡	+	+	≡	≡	—	≡	≡	≡	—

For explanation of signs or characters, see foot-note of Table I.

TABLE V.

Comparative Prevalence of Twelve Important Acute Diseases during 1888.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	=	—	..	..	=	=	—	0	+	—	0	0
Bristol.....	..	..	—	..	=	0	*	0	—	=	=	0
Warren.....	+	—	—	—	=	—	=	0	+	=	0	0
Coventry.....	—	=	=	—	—	—	—	..	—	+	*	*
East Greenwich.....	..	—	..	—	—	—	—	0	=	+	*	+
West Greenwich.....	—	—	—	..	=	0	..	..	—	—	—	..
Warwick.....	+	=	—	..	=	—	+	..	+	=	+	—
Jamestown.....	=	—	..	..	—	0	—	0	=	—	..	..
Little Compton.....	—	0	..	—	—	0	—	—	=	=	—	—
Middletown.....	=	=	—	—	—	0	—	0	=	—	—	—
New Shoreham.....	—	—	—	—	—	—	—	—	—	—	—	—
Portsmouth.....	=	=	—	—	=	0	—	0	—	—	—	—
Tiverton.....	0	0	—	0	—	0	=	=	=	=	=	—
Newport City.....	=	=	—	—	—	0	—	0	+	—	—	..
Burrillville.....	=	—	0	0	=	0	+	0	+	=	—	0
Cranston.....	+	=	—	=	=	+	=	..	—	—	=	..
Cumberland.....	=	=	..	=	=	+	—	—	—	—	—	—
East Providence.....	+	=	—	=	=	=	—	—	—	=	—	—
Foster.....	—	=	0	..	=	—	=	0	=	=	0	0
Glocester.....	=	—	0	0	=	0	=	0	+	=	0	0
Johnston.....	+	+	—	=	=	+	+	—	=	—	=	—
Lincoln.....	+	+	—	—	=	+	+	0	—	—	—	..
North Providence.....	+	+	—	—	=	*	=	*	—	+	*	—
North Smithfield ..	+	=	—	—	—	+	=	—	=	=	+	..
Pawtucket.....	+	+	—	=	=	=	+	..	=	=	—	—
Scituate.....	+	=	..	..	=	—	—	..	—	..	=	..
Smithfield.....	=	=	..	..	=	=	..	—	—	—	—	—
Woonsocket.....	+	+	..	—	=	+	+	—	=	=	*	..
Providence City.....	+	=	—	=	=	—	+	—	=	=	=	+
Charlestown.....	=	0	0	—	=	=	=	0	—	—	0	*
Exeter.....	+	0	0	..	=	0	—	0	=	+	0	0
Hopkinton.....	+	—	..	—	=	—	*	0	—	+	—	—
North Kingstown ..	=	..	..	—	+	—	..	0	=	—	—	0
South Kingstown....	=	+	..	..	=	—	=	0	=	..	—	—
Richmond.....	+	=	—	—	=	—	=	0	=	+	—	—
Westerly.....	=	=	..	—	=	=	=	0	=	+	—	..

For explanation of signs or characters, see foot-note of Table I.

TABLE VI.

Comparative Prevalence of Twelve Important Acute Diseases during 1889.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhoea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	—	—	—	—	—	—	—	+	+	—	0	0
Bristol.....	—	0	—	—	0	0	—	—	0	0
Warren	—	—	..	—	—	+	0	+	+	—	0	0
Coventry.....	—	—	..	—	+	—	—	*	—	+	—	0
East Greenwich.....	+	—	—	—	—	—	..	—	—	..	—	0
West Greenwich.....	—	—	—	..	—	—	..	—	—	+	—	—
Warwick.....	—	—	..	—	—	—	—	*	—	—	—	—
Jamestown	—	—	—	—	0	—	—	—	..	0
Little Compton.....	—	—	—	..	—	—	0	0	—	—	..	0
Middletown.	—	—	—	—	0	..	—	—	—	0
New Shoreham	—	—	..	—	—	—	0	—	—	—	..	0
Portsmouth.....	—	—	—	0	0	—	—	..	0
Tiverton.....	—	—	+	—	—	—	—	—	—	0
Newport City.....	—	—	—	—	+	—	0	..	—	—	—	..
Burrillville.....	+	—	—	—	—	—	0	+	—	—	—	+
Cranston	—	—	—	—	—	—	—	+	+	—	—	—
Cumberland	—	—	—	*	—	+	*	—	+	—	—	*
East Providence	+	—	—	—	—	—	—	—	+	—	—	+
Foster.....	—	—	—	—	—	—	0	*	—	—	0	*
Glocester.....	+	+	..	—	—	—	0	*	—	—	0	+
Johnston.....	+	—	—	—	+	—	+	+	—	—	—	+
Lincoln.....	—	—	—	+	—	—	+	—	—	—	—	0
North Providence....	+	—	—	—	—	—	—	—	—	—	—	—
North Smithfield ...	—	—	—	+	—	+	—	—	—	—	+	+
Pawtucket	—	—	—	—	—	—	+	—	—	—	—	—
Scituate.....	+	—	..	—	—	—	..	—	+	—	0	+
Smithfield.....	+	—	..	—	+	—	—	*	—	—	0	—
Woonsocket.....	—	—	—	*	—	—	—	—	—	—	*	*
Providence City	+	—	—	—	—	—	—	+	+	+	—	+
Charlestown	—	—	—	—	0	0	—	—	*	*
Exeter.....	—	—	—	—	0	—	—	—	0	0
Hopkinton.....	+	..	—	—	*	—	—	*	—	+	—	—
North Kingstown	—	—	—	—	—	—	..	—	—	—	0	*
South Kingstown ..	+	—	..	+	—	+	—	0	—	—	0	0
Richmond	—	—	—	—	+	—	..	+	—	+	—	—
Westerly.....	—	0	—	—	..	0	—	—	—	0



 For explanation of signs or characters, see foot-note of Table I.

TABLE VII.

Comparative Prevalence of Twelve Important Acute Diseases during 1890.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhoea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	+	..	=	0	=	..	=	=	+	=	0	0
Bristol.....	=	=	..	0	+	=	0	*	=	=	=	+
Warren.....	=	=	—	—	=	=	=	0	=	=	—	+
Coventry.....	=	=	—	=	=	0	..	+	—	=	—	—
East Greenwich.....	+	=	—	—	+	=	=	+	+	—	—	0
West Greenwich.....	—	=	—	—	=	=	0	—	=	—	0	0
Warwick.....	=	..	—	..	=	—	=	*	+	=	—	—
Jamestown.....												
Little Compton.....	+	—	—	0	0	=	—	0	0
Middletown.....												
New Shoreham.....												
Portsmouth.....	+	=	—	0	0	=	—	—	0
Tiverton.....	—	—	..	=	=	0	0	=	—	—	=	—
Newport City.....												
Burrillville.....	+	..	—	=	=	*	0	0	=	—	0	0
Cranston.....	+	=	—	=	+	=	=	..	+	=	+	=
Cumberland.....	=	=	—	+	=	—	+	+	=	—	—	—
East Providence.....	+	=	—	=	=	—	=	*	=	=	=	—
Foster.....	=	=	0	—	=	=	—	0	+	—	0	=
Gloicester.....	+	0	—	—	=	=	—	0	=	=	0	0
Johnston.....	+	=	—	+	=	=	+	0	+	=	—	=
Lincoln.....	=	=	—	=	+	+	+	=	=	=	—	=
North Providence....	+	=	—	—	=	—	—	0	=	=	—	0
North Smithfield....	=	—	—	—	=	=	—	—	=	=	—	..
Pawtucket.....	=	=	—	=	+	—	+	—	=	=	—	+
Scituate.....	+	—	—	—	=	—	=	=	0	+
Smithfield.....	=	*	=	..	—	0	=	=	0	..
Woonsocket.....	=	=	—	—	=	=	=	=	=	+	=	+
Providence City.....	+	=	—	—	+	=	—	—	+	=	+	+
Charlestown.....	+	=	=	0	—	0	—	—	0	0
Exeter.....	=	0	0	..	+	—	0	0	—	=	0	0
Hopkinton.....	+	..	—	—	=	=	..	*	=	—	0	*
North Kingstown....	=	..	0	..	=	—	0	*	—	=	0	*
South Kingstown....	+	—	—	—	=	+	—	+	+	+	—	*
Richmond.....	=	—	..	—	=	—	0	+	—	=	0	=
Westerly.....	=	..	0	..	+	..	—	*	=	=	0	*

 For explanation of signs or characters, see foot-note of Table I.

Influenza epidemic all over the State, January and February.

TABLE VIII.

Comparative Prevalence of Twelve Important Acute Diseases during 1891.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhoea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	+	—	—	—	==	—	—	0	+	+	0	0
Bristol.. .. .	==	..	0	0	==	—	0	0	—	..	0	0
Warren.....	+	==	—	—	==	—	—	0	+	+	0	0
Coventry.....	==	==	==	—	==	..	—	==	+	—	0	+
East Greenwich.....	+	—	—	0	—	—	0	==	==	==	—	—
West Greenwich.....	+	—	0	..	—	0	0	0	==	+	0	..
Warwick.....	+	==	..	—	==	—	—	—	==	—	—	+
Jamestown.....	—	==	—	—	==	—	0	0	==	—	..	0
Little Compton.....	—	—	—	—	—	—	—	—	—	—	—	—
Middletown.....	+	==	==	..	==	—	0	0	+	—	..	0
New Shoreham.....	—	—	—	—	—	—	—	—	—	—	—	—
Portsmouth.....	—	—	—	—	—	—	—	—	—	—	—	—
Tiverton.....	—	—	—	—	—	—	—	—	—	—	—	—
Newport City.....	==	+	+	—	==	==	0	..	+	—	..	0
Burrillville.....	==	==	0	—	—	—	..	0	==	—	0	*
Cranston.....	+	==	—	—	+	—	—	—	+	—	—	+
Cumberland.....	==	—	—	—	—	*	+	—	==	==	—	*
East Providence.....	+	+	—	—	+	*	0	0	+	—	—	*
Foster.....	+	..	—	..	==	0	0	0	==	==	0	—
Glocester.....	==	==	..	—	—	—	..	0	—	—	0	*
Johnston.....	+	==	..	—	+	—	—	—	+	—	—	+
Lincoln.....	+	==	..	—	—	+	+	—	==	+	—	+
North Providence.....	+	0	..	0	—	+	—	+	—	..	0	*
North Smithfield ..	+	==	—	—	—	==	—	—	0	—
Pawtucket.....	+	—	..	—	—	—	+	—	==	—	—	+
Scituate.....	+	==	—	—	—	0	..	0	==	—	0	+
Smithfield.....	+	—	*	..	*	—	..	0	*
Woonsocket.....	+	—	—	—	—	—	—	+	—	—	0	+
Providence City.....	+	—	—	—	—	—	—	+	—	—
Charlestown.....	+	—	—	0	0	+	..	..	0
Exeter.....	+	0	..	0	—	..	0	0	—	==	0	0
Hopkinton.....	+	0	..	..	+	—	..	0	+	+	..	0
North Kingstown....	+	—	—	0	—	..	0	0	—	—	..	0
South Kingstown....	+	—	—	..	—	—	..	0	—	+	..	0
Richmond.....	+	0	..	..	+	..	..	0	+	—	0	0
Westerly.....	+	—	0	0	==	+	—	0	—	—	+	—

For explanation of signs or characters, see foot-note of Table I.

Epidemic Influenza, large prevalence, all towns, December.

METEOROLOGY.

It has been remarked in previous reports of the Board that the influence of the meteorological condition of the atmosphere, as well as the floating matter suspended therein, as causes of disease, are recognized and acknowledged by all pathologists ; and the following tables are therefore introduced as heretofore, for the purpose of comparing the large prevalence of certain diseases at different periods of the year, with the ranges of temperature, the atmospheric pressure, the relative humidity, the prevailing direction and force of the wind and other conditions of the atmosphere, and also the amount of cloud and rainfall during each month of the year. All of the said diseases may be found in the report upon the registration of deaths arranged by MONTHS, in Table VII of the Registration Report.

The first table is compiled from the monthly reports of the City Engineer of Providence, and shows the mean, maximum and minimum temperature of the different months, and the extreme and average daily range of the same, the rainfall and prevailing direction of the wind.

The second table will give a more comprehensive monthly summary of observations during 1891, including a large number of atmospheric conditions for each month, and also yearly summaries for each of the ten preceding years.

It is condensed from the annual summary of monthly observations at Hope Reservoir and the City Hall.

The meteorological observations taken on Block Island are furnished by the courtesy of the officers of the Weather Bureau, Department of Agriculture, Washington, D. C.

TABLE I.

Temperature, Ranges of Temperature, Rainfall and Prevailing Direction of the Wind, for each Month during the year 1891.

MONTHS, 1891.	TEMPERATURE.						Total amount of Rain or Melted Snow in inches.	Prevailing Direction of the Wind.	
	Monthly Mean.	Maximum.	Minimum.	Monthly Range.	Greatest Daily Range.	Least Daily Range.			Average Daily Range.
January.....	32.2	51.	16.5	34.5	21.0	2.0	11.5	8.14	N. & N. W.
February.	33.6	59.5	9.0	50.5	29.5	8.5	15.2	6.00	N. & N. W.
March.....	35.3	58.0	6.0	52.0	24.5	6.0	14.8	5.55	N. E. & N. W.
April.....	50.2	80.5	28.0	52.5	36.5	5.0	18.4	3.58	N. W.
May.....	57.8	84.5	35.0	49.5	41.0	7.5	20.	2.29	S.
June	68.1	98.0	46.0	52.0	30.5	4.5	11.5	3.50	Var.
July.....	70.9	90.0	56.0	34.0	29.5	7.5	17.2	3.31	S.
August.....	72.3	96.0	55.5	40.5	24.0	4.0	16.9	6.26	S.
September.....	66.3	87.5	48.5	39.0	23.5	5.0	16.3	2.77	Var.
October.....	51.5	81.0	28.0	53.0	25.5	8.5	16.0	2.00	N. & N. W.
November.	41.7	66.0	12.0	54.0	30.5	7.5	14.0	2.84	N. & N. W.
December.....	41.0	62.5	12.0	50.5	29.0	4.5	15.5	4.25	S. W. & N. W.
For the year.	51.7	98.0	6.0	46.8	.....	.....	..	53.19	

Mean temperature for the year 1891 was 51.7 Fah. Total amount of rain and melted snow, 53.19 inches.

TABLE II.
Summary of Meteorological Observations at Hope Reservoir and City Hall, for the Year 1891.

MONTHS.	BAROMETER.			THERMOMETERS.				Relative Humidity.	WIND.						WEATHER.				RAIN AND SNOW.								
	Reduced to Sea Level, and to 32°								Prevailing Direction, No of days it was						Atmosphere, No. of days it was				Amount of Rain or Melted Snow in inches.	Depth of Snow in inches.							
	Mean.	Minimum.	Maximum.	Range.	Mean.	Minimum.	Maximum.		Range.	N. E.	S. E.	S. W.	N. W.	Variable.	Mean Velocity.	Clear.	Fair.	Variable.			Rain or Snow.	All Others.	Mean Amount of Cloud.				
January.....	29.96	30.57	28.81	1.76	32.2	51.	16.5	34.5	79	6	0	1	0	3	3	5	7	6	9	3	10	1	17	0	6.0	8.14†	8.00
February.....	30.02	30.68	29.28	1.40	33.6	59.5	9.	50.5	78	4	1	1	0	5	3	1	7	6	10	4	4	2	18	0	5.9	6.00†	13.25
March.....	30.07	30.53	29.40	1.13	35.3	58.	6.	52.	70	6	6	2	2	1	2	1	7	4	10	6	10	1	13	1	5.2	5.55†	8.00
April.....	29.93	30.56	28.89	1.67	50.2	80.5	28.	52.5	66	4	0	2	0	6	2	4	11	1	9	1	17	0	12	0	4.3	3.58†	*
May.....	29.99	30.48	29.57	.91	57.8	84.5	35.	49.5	69	0	2	0	3	7	2	1	3	13	8	1	14	0	13	3	5.2	2.29	.....
June.....	29.92	30.20	29.68	.52	68.1	98.	46.	.52	70	5	5	0	1	2	3	4	4	6	7	1	15	0	13	1	5.2	3.50	.....
July.....	30.01	30.38	29.63	.75	70.9	90.	56.	34.	76	2	0	0	1	9	8	1	3	7	7	0	15	0	16	0	5.3	3.31	.....
August.....	29.99	30.29	29.69	.60	72.3	96.	55.5	40.5	79	1	3	0	2	7	4	2	2	10	6	0	17	0	14	0	5.7	6.26	.....
September.....	30.12	30.43	29.64	.79	66.3	87.5	48.5	39.	79	3	3	1	0	6	3	2	5	7	6	2	18	1	9	0	3.9	2.77	.....
October.....	30.01	30.58	29.53	1.05	51.5	81.	28.	53.	77	7	2	1	0	4	2	1	8	6	8	5	12	2	12	0	4.8	4.70†	2.00
November.....	30.12	30.78	29.33	1.45	41.7	66.	12.	54.	72	6	0	0	2	7	2	2	6	5	8	7	13	0	10	0	5.2	2.84	.....
December.....	30.08	30.47	29.26	1.21	41.	62.5	12.	50.5	68	2	2	0	0	6	6	2	10	3	10	7	13	0	11	0	4.6	4.25†	*
Means for the year.	30.02	.....	.....	1.10	51.7	.....	.....	46.8	74	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.2	.....	.....	.....	.....	.....	5.1	.....	.....
Totals for the year	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	24	8	11	63	40	26	73	74	.....	37	158	7	158	5	.....	53.19	31.25
Extremes.....	.....	30.78	28.81	1.97	.....	98.	6.	92.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Too small to be measured.

† Snow and rain.

TABLE II.—CONCLUDED. *Yearly Summary of Meteorological Observations at Hope Reservoir and City Hall.*

1881.	BAROMETER.				THERMOMETERS.				Relative Humidity.	WIND.								WEATHER.				Amount of Rain or Melted Snow in inches	RAIN AND SNOW.				
	Reduced to Sea Level, and to 32°									Mean.	Prevailing Direction.				No. of days it was	Mean amount of Cloud.	Atmosphere.										
	Mean.	Maximum.	Minimum.	Range.	N.	N. E.	E.	S. E.			S.	S. W.	W.	N. W.			Variable.	Clear.	Fair.	Variable.	Rain or Snow.			Variable.			
Means for the year.	30.00	1.08	49.6	44.5	73	8.6	5.1		
Totals for the year.	47	33	12	9	50	47	20	80	67	..	80	73	54	130	28	..	44.79	27.50
Extremes	30.80	28.97	1.83	96.	-4.	100.	

The mean velocity and amount of cloud are expressed approximately in figures 0 to 10.

The rainfall observations previous to 1886 have been corrected for an inaccuracy caused by the imperfect construction of the gauges with which they were made.

TABLE III.

BLOCK ISLAND, R. I.

Statement showing the air pressure, reduced to 32° and sea level; the air temperature, (average, extremes and range,) total monthly and annual precipitation and the prevailing direction of the wind for 1891 at Block Island, R. I.

1891. MONTHS.	PRESSURE.			TEMPERATURE.							Precipitation in inches.	Prevailing Wind direction.
	Mean.	Highest.	Lowest.	Mean.	Maximum.	Minimum.	Absolute Range.	Mean Daily Range.	Greatest Daily Range.	Least Daily Range.		
January	30.02	30.55	28.94	34.4	52	20	32	10.4	20	4	4.25	N. E.
February....	30.08	30.73	29.29	34.9	52	12	40	12.0	24	6	3.97	S. W.
March.....	30.11	30.54	29.47	35.2	59	9	50	10.1	21	4	2.42	N. E.
April.	29.98	30.59	29.09	44.9	67	30	37	10.8	23	5	2.81	S. W.
May	30.03	30.51	29.68	51.9	70	36	34	12.0	24	5	2.14	S. W.
June.	29.95	30.23	29.73	61.0	79	46	33	11.6	22	3	1.83	S. W.
July	30.04	30.39	29.76	65.0	79	53	26	9.5	15	4	3.38	S. W.
August.	30.01	30.26	29.72	69.2	85	56	29	9.2	18	4	3.51	S. W.
September..	30.15	30.39	29.82	65.8	81	56	25	9.8	20	2	1.69	S. W.
October.....	30.03	30.51	29.57	53.1	74	34	40	10.0	16	4	7.33	N. E.
November..	30.16	30.81	29.43	43.4	61	19	42	9.5	18	5	2.89	N. E.
December..	30.14	30.51	29.37	41.7	59	12	49	11.4	22	3	2.81	N. W.
Annual.	30.06	30.81	28.94	50.0	85	9	36	10.5	20	4	39.03	S. W.

U. S. Department of Agriculture, Weather Bureau, Records Division.

WATER SUPPLY.

The large proportion of the population of Rhode Island dependent on public water supplies for the potable water in daily use makes the subject of the purity of such supplies one of great importance.

There has been a considerable change during the last few years in the views held by those who have given the subject particular attention as to what constitutes pollution, and especially the kind of pollution that is the most deleterious to health.

Time was when the mineral constituents were regarded as affording the maximum danger, the presence of chlorine, the nitrogen compounds and other inorganic substances in solution beyond a certain amount; and the same pollutions are still regarded as dangerous to health, and the waters of which they are component parts are thereby rendered unfit for domestic use.

The decomposing organic matter in water was also regarded as possessing properties deleterious to health if in any very considerable proportion, and such opinion has a reasonable foundation.

At the present time, however, the most dangerous constituents of water used for drinking purposes without thorough boiling, are the living, almost infinitesimal, organisms, the specific disease germs.

That typhoid fever has had its origin in water polluted by the intestinal excretions of typhoid fever patients is scarcely to be disputed. Unfortunately no practicable methods of completely eliminating these germs from larger bodies of water are now known.

The ordinary organic matter can be filtered out of volumes of water, large or small, or extensively diluted, or precipitated by harmless astringents, the minute particles of which become entangled with the coagulated precipitant and fall with it, or it may be converted in time into other forms or broken up and take on harmless properties by natural processes, as by oxidation, or absorption by vegetation, or destruction by harmless bacteria and water inhabitants, and thus become safe for drinking purposes.

But no water containing disease germs can be made safe for drinking purposes by any agencies at present employed, except by heat above 212 F., which obviously limits the amount of water so treated to comparatively small volumes.

The State Board of Health has, during the whole period of its existence, given attention to the condition of the public water supplies and the effects of the pollution of the rivers in the State. The annual reports of the Board have presented suggestions as to methods of investigation, the needs of investigation, the objects to be accomplished thereby; and resolutions have been introduced in the various sessions of the General Assembly to request the Board to make such investigations, but up to the present time no appropriation has been made for such purpose.

During 1891, in continuance of the attention given to rivers pollution, and to sources of public water supply, a party (Mr. Samuel Young) was employed to travel up and down the banks of the Pawtuxet river and its tributaries, and note the sources of pollution, if any, giving the dates of observation, places, circumstances, and qualities or kinds of material finding access to the river. His report has been published in the daily papers substantially as made to the Board, and need not be repeated in this connection. It showed that, at least, the waters received a large amount of polluting material which might have been otherwise disposed of without any burdensome expense.

Ten samples of water were taken at various places, and some of them at the points where the waste waters of manufacturing establishments first mingled with the water of the river.

These samples were put in the hands of Prof. J. H. Appleton, of Brown University, and State Assayer George E. Perkins for analysis.

The following communications and accompanying tables will present the results of the analyses made at the respective laboratories:

CHEMICAL LABORATORY OF BROWN UNIVERSITY, PROVIDENCE, R. I.

CHARLES H. FISHER, M. D.,

Secretary of the Rhode Island State Board of Health.

DEAR SIR:--I submit to you the following report of the results of my analyses of seven samples of water received from you for examination. The numerical results are presented on the printed slips corresponding to each sample of water. I will first comment on the results in general and then on the particular samples examined.

The results from samples 4, 7 and 8 show that they are distinctly polluted waters and that if such waters are introduced into water to be employed for public supply such supply would be distinctly injured. Of course a small amount of such polluting material as is represented by samples 4, 7 and 8 would represent a small amount of injury to a pure water, while a large amount of the impure liquid added to pure water would accomplish a large pollution of it. Samples 9, 10, 11 and 12 contain small amounts of impurity similar to that in ordinary river water. Samples 9 and 10 are the better pair. Samples 11 and 12 are the inferior pair. These four samples cannot be distinctly characterized as pure or impure without some more knowledge of their sources. If they have received polluting materials those materials have been diluted to such an extent with purer water as to be proportionately diminished in amount. Of course impurities delivered into pure river waters may precipitate or may be oxidized and so rendered less injurious by natural processes, but no chemist could recommend any river water for drinking purposes upon the mere analytical results; and if river water be used for drinking purposes it should never be permitted to receive any polluting materials at all. It is not safe to rely upon the purifying processes of nature.

As a general comment on samples Nos. 9, 10, 11 and 12, the chemist who received them (without knowledge of their source) for examination would say that they are fair river waters. If they have received any polluting materials, such materials must have been largely diluted by water yet purer than the samples as delivered for analysis.

Respectfully submitted,

JOHN HOWARD APPLETON.

CHEMICAL LABORATORY OF BROWN UNIVERSITY.

Memorandum of Water Analyses for State Board of Health by Prof. J. H. Appleton.

The larger figures signify parts (by weight) in one million parts of water, (by weight).

The smaller figures signify grains per American gallon of water, (weighing 58,372.2 grains).

Sample.	Total Residue.	Organic and Volatile Matter.	Mineral Matter.	Common Salt.	Albuminoid Ammonia.	Ready- formed Ammonia.
No. 4.....	923. 53.877	748. 43.662	175. 10.215	11.856 .692	6.00 .3502	.50 .0292
No. 7.....	356. 20.780	251. 14.651	105. 6.129	24.898 1.453	17.00 .9923	.90 .0525
No. 8.....	181. 9.565	95. 5.543	86. 5.030	14.820 .865	1.80 .1051	.10 .0058
No. 9.	44. 2.568	17. .992	27. 1.576	4.742 .277	.18 .0105	0 0
No. 10	44. 2.568	19. 1.109	26. 1.518	5.335 .311	.18 .0105	.04 .0023
No. 11.....	45. 2.627	15. .876	30. 1.751	5.335 .311	.28 .0163	.02 .0012
No. 12.....	49. 2.860	20. 1.167	29. 1.693	4.742 .277	.26 .0152	.04 .0023

COMMENTS ON RESULTS OF ANALYSIS OF No. 4.

The odor of this sample was neutral, that is, not very decided either way.

The color was dull red.

The sediment was reddish as if from dye-stuffs.

The various numerical results show the water to be polluted by all the various kinds of matter specified in the table above. Such polluting material ought not to be added to a water supply to be used for drinking.

COMMENTS ON RESULTS OF ANALYSIS OF No. 7.

The odor was offensive when the sample was received and upon standing it became exceedingly offensive, resembling the odor of decaying fish.

The color was bright red.

The sediment was flaky and not very marked in color.

The numerical results in the table show this sample to be highly polluted and to be entirely unfit for introduction into any water to be used for drinking.

COMMENTS ON RESULTS OF ANALYSIS OF No. 8.

The odor of this sample was neutral.

The color was dark brown, dependent chiefly upon the flakes in the sample.

The sediment was composed of dark brown flakes.

The analysis shows the water to be considerably polluted, although not to as great an extent as the samples No. 4 and No. 7. Water such as this sample, No. 8, must however be looked upon as distinctly unfit to introduce into pure water used for drinking purposes.

COMMENTS ON RESULTS OF ANALYSIS OF No. 9 AND No. 10.

These two samples resembled each other quite closely.

In both cases the odor is neutral.

In both cases the color is slightly yellow like ordinary river water.

In both cases the sediment is slightly yellow.

The analytical results correspond with reasonable closeness, although sample No. 9 appears to be slightly freer from impurity than sample 10. In sample No. 9 the albuminoid ammonia is less in amount than that found in many river waters, and the ready-formed ammonia being at zero is a very favorable indication.

The statement in the preceding sentence may apply to the ammonia in sample No. 10, only here the ready-formed ammonia is represented by .04 of a part per 1 million of water, a moderate amount for river water.

COMMENTS ON RESULTS OF ANALYSIS OF No. 11 AND No. 12.

Samples No. 11 and No. 12 resembled each other quite closely.

In both cases the odor is neutral.

In both cases the color is slightly yellow like ordinary river water.

In both cases the sediment consists of light yellowish flakes.

The analytical results correspond with reasonable closeness. In both samples No. 11 and No. 12 the albuminoid ammonia, although greater than the amount in the pair of samples marked No. 9 and No. 10, is moderate for river water. It cannot be called excessive. Many river waters contain more.

In both cases (samples No. 11 and No. 12) the amount of ready-formed ammonia is low.

OFFICE OF GEORGE E. PERKINS,
STATE ASSAYER, PROVIDENCE, R. I.

DR. CHARLES H. FISHER,
Secretary State Board of Health:

DEAR SIR:—I herewith submit reports of four samples of water, Nos. 2, 3, 5, 6, all of which are unfit for drinking purposes.

Respectfully,

GEORGE E. PERKINS.

No. 152.

CERTIFICATE OF ANALYSIS.

The sample of water marked No. 2, received December 9, 1891,

Contains:

Total solids.....	38.	parts per million.
Organic and volatile.....	16.	"
Mineral.....	22.	"
Chlorine.....	5.5	"
(Equivalent to chloride sodium.....)	9.)	"
Free ammonia.....	.13	"
Albuminoid ammonia.....	.23	"

Sample clear.

No. 153.

CERTIFICATE OF ANALYSIS.

The sample of water marked No. 3, received December 9, 1891,

Contains:

Total solids.....	42.	parts per million.
Organic and volatile.....	19.6	"
Mineral.....	22.4	"
Chlorine.....	4.5	"
(Equivalent to chloride sodium.....)	7.4)	"
Free ammonia.....	.02	"
Albuminoid ammonia.....	.28	"

A brownish flaky sediment floating in water.

No. 155.

CERTIFICATE OF ANALYSIS.

The sample of water marked No. 5, received December 9, 1891,

Contains:

Total solids.....	64.	parts per million.
Organic and volatile.....	20.	"
Mineral.....	44.	"
Chlorine.....	5.5	"
(Equivalent to chloride sodium.....)	9.)	"
Free ammonia.....	.07	"
Albuminoid ammonia.....	.36	"

Contained sediment of grasses, and finely divided organic matter.

No. 154.

CERTIFICATE OF ANALYSIS.

The sample of water marked No. 6, received December 9, 1891,

Contains:

Total solids.....	159.2	parts per million.
Organic and volatile	92.4	"
Mineral..	66.8	"
Chlorine.....	7.5	"
(Equivalent to chloride sodium.....	12.38)	"
Free ammonia....	.30	"
Albuminoid ammonia.....	1.	"

Sample clear, yellowish in color, occasioned by the presence of *chromates*.

Respectfully,

GEORGE E. PERKINS.

Sample No. 2 of the four last preceding was taken at the dam of the Spring Lake reservoir above Fiskville.

The points at which each of the samples, the analysis of which is given above, was taken, is on record and may be seen at the office of the Board.

The following communication from Prof. J. H. Appleton was in relation to a sample of water taken at the overflow of the dam at Hunt's Mills, on the Ten Mile river, where the East Providence Fire District Water Works Association proposes to take water for fire and domestic purposes.

The location was visited November 3d by S. M. Gray, C. E., and the Secretary, by appointment of the Board and on request of the Water Works Association. Subsequently to the above visit Mr. Gray made a more extended and professional examination, and the propositions made in his report will be followed substantially in the construction of the plant.

CHEMICAL LABORATORY OF BROWN UNIVERSITY,

PROVIDENCE, November 28, 1891.

DR. C. H. FISHER,

DEAR SIR:—I hand you an enclosed slip, the numerical results of my analysis of a sample of water marked No. 1, received from you.

I comment upon these results as follows (but I do not know the source of the water): The totals, organic and mineral matters, do not demand much comment; they may be considered favorable.

The salt is somewhat large unless it can be satisfactorily accounted for (by reason of proximity to the sea or Narragansett Bay). Salt, though not itself injurious, is considered a sign of access of sewage, unless otherwise explicable. The albuminoid ammonia is *medium* in quantity; if the water is from an unpolluted river or lake, the amount is not too great. If the water is from a well the amount would give rise to suspicion. The free ammonia—ready-formed ammonia—is so small in quantity as to be considered a very favorable indication.

Yours very truly,

JOHN H. APPLETON.

Memorandum of Water Analysis, 1892, by Prof. John Howard Appleton.

The larger figures signify parts (by weight) in one million parts of water (by weight).

The smaller figures signify grains per American gallon of water (weighing 58,372.2 grains).

Location, etc.	Total Residue.	Organic and Volatile Matter.	Mineral Matter.	Common Salt.	Albuminoid Ammonia.	Ready- formed Ammonia.
November, 1891.	76. 4.436	20. 1.167	56. 3.269	8.299 .484	.22 .0128	.02 .0012

THE DISPOSAL OF GARBAGE AND OTHER WASTES.

The methods of disposal of garbage furnish matter for discussion almost equal in importance to that of the methods of the disposal of sewage.

It will be understood that the term garbage is meant to include not only the remnants of flesh and fish left over or discarded in the preparation of such articles for cooking and the wastes of the same from the table, but also all vegetable and other putrescible wastes of the kitchen and household occurring in any other manner, and separately or altogether, usually denominated "swill." Other wastes, especially the decayed fruits, vegetables and spoiled meat and fish of markets and stores should be included.

All knowledge of facts in relation thereto that can be obtained as to the methods of disposal promising the best results in all respects, will be of especial value to the public at large.

There is one simple mode of disposal, however, which may be alluded to and which, if it could be carried out, would be entirely satisfactory to all health authorities and an immense saving of expense to every municipal government providing for the removal of such material.

That is, the immediate destruction by fire of such material upon the premises where it is produced.

This method of disposal can be accomplished much easier in the majority of households than would at first thought be deemed practicable. Thrown upon the burning coal or wood at one end of the fire chamber of a stove or range in small quantities at a time, it would be reduced to cinders or ashes without any appreciable diminution of heat or additional expense, and with a fair draft through the smoke flues, without the escape of any odor.

True, the proverbial thoughtlessness and lack of order in the household management of certain classes, and the large use of gas stoves for cooking during the warm season, present difficulties in the way of such disposal. It is a question, however, whether families in compact populations may not be reasonably required by municipal ordinances to effect the entire and final destruction of all their garb-

age by use of the stove or other suitable contrivance, and under the oversight of a sanitary inspector, every week or oftener, of families over which such supervision might be needed.

In the city of Providence the work of the removal of garbage is systematic, frequent and quite complete. In that respect it is unexcelled in any city of the American Union.

There are other cities and large towns in the State where the public work of collection is less completely accomplished and the disposal very much less satisfactory. It is known also that other compact communities, not having the benefit of public removal of garbage and other putrescent wastes, are considering methods of collection and disposal of such material, and therefore whatever can give enlightenment upon the subject will be of advantage to a large proportion of the citizens of the State. It is with this view that the following extracts from various papers and reports are presented.

It may be premised that they are embodied in a report made by a committee "On Disposal of Waste and Garbage" of the American Public Health Association, at the meeting of that Association, held at Kansas City, Mo., in October, 1891. The names of the Committee (which give assurance of a scientific and judicious treatment of the subject) are as follows: Delos Fall, Albion, Mich.; Granville P. Conn, M. D., Concord, N. H.; Crosby Gray, Pittsburg, Pa.; Rudolph Herring, C. E., New York City; Edward Clark, M. D., Buffalo, N. Y.

The committee state that in making the present report, there will, no doubt, be the repetition of some familiar and oft expressed facts; and still, in this question, as in others, iteration and reiteration may be needful in bringing about a reform already too long delayed. The dangers are real; the victims due to neglect of this important question fall on every hand. Heaps of garbage continue to be disease-breeders, furnishing the proper conditions for the rapid growth and development of any disease germs which may lodge therein.

The processes of putrefaction and decay are better known to-day than formerly; these do not consist of mere oxidation, but in large part are due to the action of the bacteria of putrefaction and fermentation. Where these ordinary bacteria thrive, pathogenic germs may, and hence it follows that garbage accumulations are a constant menace to the public health. Forgetful of the well known biological law, that all living beings, including man, produce excretions which are poisonous to themselves, he still goes on accumulating masses of such excrementitious matters, until the earth, water, and the very air is charged with death-producing elements, afflicting not alone himself, but his family, the neighborhood, the entire community, or even the large city,—sometimes, by the carelessness of a single person, spreading disease broadcast over the whole land.

* * * * *

THE GROUND COVERED BY THE REPORT.

The present report is one merely of progress, many points which have been raised not having as yet been discussed in any adequate manner. Progress has been made, and valuable material gathered, all of which will be handed over to the committee that shall be appointed at this meeting to continue with the work.

We are endeavoring to study over the entire ground,—from the case as it presents itself in the smaller town, to that of the metropolis; from the stand-point of the householder, merchant, and manufacturer, as well as from that of the municipal corporations in whose hands the successful accomplishment of the work finally rests; from the stand-point of those towns and cities which have a well established water-supply system with its accompanying sewers, to those unprovided with these appliances, and which are still depending upon private wells for their water supply.

We have desired that those who are personally and pecuniarily interested in methods of final disposal should have a hearing, and an opportunity to establish their claims to the best solution of the problem; and at the same time we have desired that the people should be thoroughly protected as against the expenditure of public money invested in schemes which will inevitably result in failure to accomplish the desired end.

The report emphasizes the following features of the subject:

1. As primary to all other considerations, there should be the education and enlightenment of the people with reference to the dangers arising from the neglect of this question.

The committee, in their investigations, have become deeply impressed with the wide spread indifference which still prevails regarding this subject, and they call on true sanitarians everywhere to use all their influence in moulding a healthy public sentiment which shall speedily work reform in this direction.

The people must be taught that the public health is not a thing to be tampered with. Reckless individuals must not be permitted to jeopardize their own and their fellow citizens' lives by carelessness in the midst of disease-producing conditions. The committee urge the holding of frequent sanitary conventions, carried on by the state and local boards of health, in which careful instruction shall be given regarding the house and its surroundings, the relation of filth to disease, of the well to the privy vault, of the house to the cesspool, etc., and of all these to contagious and communicable diseases. In large cities the public press ought to be teachers along these lines.

2. The mayor and common council of the cities, the presidents and trustees of villages, local boards of health and health officers, prosecuting attorneys and the police, all have important relations to this question. These responsibilities they should feel and know, because of their intelligent study of the subject in all its bearings. Two courses are open to these parties: Either, they must inform themselves, and by their intimate knowledge of the subject be able to legislate for themselves, or they must place the whole management of these and kindred subjects in the hands of a well paid, enthusiastic, educated, health officer, who shall have full control, with proper ordinances to enforce his views, with full and sufficient penalties for the violation of the law, and with the moral

and financial backing of the officers of the law, without which his work will fail. In the opinion of the committee, the health officer, acting as the executive of a small but thoroughly informed and progressive health board, is the proper person who should have this power placed in his hands, and he should be held strictly responsible for thorough and effective work in this direction. Mayors and aldermen, as a rule, will not inform themselves properly.

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3. By way of comment on this part of the report, the committee desire to say that, in their opinion, this body, the American Public Health Association, should raise its voice emphatically against the perpetuation of the old-fashioned, deep privy vault system, and the traditional earth-storage system. If it is necessary that a privy vault be used, it should never be of greater depth than two feet, and should frequently be cleaned. Other than these should be completely abolished, not alone in those cities which by their sewer systems may conduct human excreta into the same, and so remove them from immediate power to produce mischief, but this reform should be carried into all villages and farming communities. The evils arising from the lack of attention to this are not confined to large and densely populated cities, although in such places the evil is greatest: the small village and hamlet, the country residence even, may give rise to serious epidemics due to lack of care in this direction. It is not too much to hope that one of the early results reached through the influence of sanitarians shall be that this plague spot, this relic of barbarism, shall be utterly wiped off the face of the earth. It certainly requires no argument to prove the objectionable features of the ground storage system.

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We may study to advantage some of the model by-laws of local government boards of cities in England which pertain to cesspools. One of these requires that cesspools must be at least fifty feet away from the dwelling. It must have no communication whatever with the drain from the house (the attestations of makers and advocates of patent sewer traps to the contrary notwithstanding), its walls and floors must be constructed of good brick work in cement, thoroughly cemented inside, and with a backing of well packed clay of at least nine inches. Around and beneath the brick-work, the top of the cesspool must be arched over, and means of ventilation provided. Constructed in accordance with these principles, they are far superior to the practice of emptying liquid and semi-solid waste matters into the earth, quickly to make their way through the soil and into the well. It is, however, bad practice to store such material for any length of time in any receptacle, there to putrefy and generate noxious gases. They should be emptied frequently.

4. The fourth point which the committee desire to enforce is that by which correct methods are arrived at concerning the collection and preservation of garbage by householders, hotel keepers, etc., and the transportation of the same to the place of final disposal. Much of the annoyance complained of by the people, many of the nuisances, have arisen from the careless and imperfect manner in which garbage has been allowed to accumulate about the premises, the unsightly, foul-smelling receptacles used, and the open carts and wagons dropping their refuse along the way, and presenting to the eye that which is offensive

in the extreme. These questions are discussed by Dr. Clark, and also by Colonel W. F. Morse.

5. As fundamental to the discussion of the practical handling of garbage, the committee found it necessary to have a common understanding in regard to the classification of material which should be regarded as garbage, and to which our study should be confined. An enumeration of these materials would include ashes, street sweepings, kitchen refuse from hotels and private houses, manufacturers' refuse, fruits, vegetables, etc., from grocers; manure, dead animals, night-soil, tin cans, bottles, etc. These wastes may be classified into (1) inorganic and (2) organic. Of the inorganic wastes may be mentioned ashes, street sweepings, certain forms of manufacturing refuse, tin cans, bottles, etc. The organic wastes include the vegetable wastes from private houses, hotels, and groceries, certain forms of manufacturers' refuse, the ordure of animals, the excretions of man, and dead animals.

As ordinarily used, and therefore as used in this discussion, the term garbage includes simply vegetable wastes, such as refuse from groceries, the kitchen, etc.; the term animal waste includes the ordure of animals, and the solid excretions from man; wastes from manufacturing establishments, and all inorganic wastes, may be included under the term refuse.

COLLECTION AND TRANSPORTATION OF GARBAGE AND NUISANCE-PRODUCING WASTE IN CITIES.

BY EDWARD CLARK, M. D., BUFFALO, N. Y.

The first great task that every municipality must undertake, as the initial step toward successfully solving the "garbage and refuse problem," is a thorough education of the masses on the importance and necessity of forever keeping garbage and all nuisance-producing refuse separate from street dirt, ashes, tin cans, bottles, old shoes, etc. This educational crusade must be carried on, in part by appealing to the moral and intellectual sensibilities of the public, and partly by compulsion. The more enlightened and cultured portion of our population, and those who have a just appreciation of the importance and necessity of observing hygienic rules and regulations, need only to have pointed out to them the unwise and dangerous practices to which many of them at times unwillingly resort, to have the evils speedily remedied. On the other hand, in all of our large cities we find a population, whose name is legion, made up of a conglomerate mass from different nations of the earth, who have almost no regard for personal cleanliness, and much less for hygienic requirements, many of whom seem to be in their most natural and satisfactory environment when surrounded by a filthy and nuisance-laden atmosphere.

It is to this latter class of individuals that the compulsory educational methods in hygiene must be applied. The foundation upon which a superstructure of compulsion is to be erected must be furnished by the municipality in the shape of rigid and severe ordinances, rigidly and severely enforced.

The ordinances relating to this subject, and indeed all health ordinances, should be definite and specific, and so simple that the wayfaring man, though a fool, need not err therein. They should specify what kind of receptacles are to be used for garbage and other refuse; that garbage and other nuisance-producing refuse must never be placed in the receiver for ashes, street dirt or sweepings, tin cans, bottles, old shoes, and other dry material.

The inspection forces of a city should be clothed with full police power, so that it would be almost impossible for any person to escape detection for violation of a health ordinance, and justice should be so righteously administered, that, upon convincing and proper evidence of guilt, the offender could not escape the penalty of such violation. The kind of vehicles used for the transportation of garbage and other refuse should be specified, and the collection and removal of garbage and waste should be done at specified times, always subject to the rules and regulations of the health department, and under the immediate supervision of some of its attachés, each of whom should be held to strict account for the manner in which the work under his immediate supervision is performed. In fact, the whole matter of handling and disposing of garbage and all nuisance-producing refuse should at all times be under the control and management of the city's health department,—this, for the reason that garbage, and all vegetable and animal refuse, are among the great nuisance-producing factors of the age; and, as I understand it, dealing with nuisances and their causation is the especial prerogative of a health department. The question of street cleaning, and the removal of ashes and refuse of all kinds, not animal or vegetable, may at all times be safely relegated to the supervision of other departments, but the question of dealing with garbage and dead animals—never. This belongs to the health department, as much as does the management of an epidemic of small-pox.

Perhaps it is not advisable for a municipality to own the plant for doing this work, for this implies a large and perhaps unprofitable investment, and necessarily multiplies the number of places to be filled by political preferment. As the amount of work to be done can be pretty accurately determined, it would perhaps be best and most economical for the city to let the work by contract. What I insist on is this, that, no matter who does the work, it should always be done subject to the regulations and requirements of the health department, and under the supervision of men connected with, and responsible to, that department.

Having said so much by way of preface, it is now my intention to go into detail, and offer, first, a few suggestions relative to the subject of "receptacles for storage prior to the time of collection." The results of my studies and observations have led me to believe that by far the best receiver for garbage and refuse, and even for ashes, is a galvanized iron tank holding about two or three bushels; it should be strong, and firmly made, and provided with a tightly fitting flange cover. It should be portable, and for this reason should be provided with handles on either side. It should never be uncovered, except when absolutely necessary, and should be kept in the rear of the house, or in the basement areas or passage-ways, and never upon the street or sidewalk.

The collectors should be obliged to go into the yard or area, carry the receptacle containing the garbage and refuse to their wagon or cart, remove the cover,

dump its contents, replace the cover, and carry the receptacle back to its proper place. This is necessary, as it will prohibit the householder or store-keeper from setting out on the sidewalk, or at the curb stone, his garbage and refuse barrels—a practice now altogether too common, and which ought to be prohibited by penalty under any and all circumstances.

I have in mind now a picture of a most beautiful avenue in one of our most beautiful cities, where on warm summer mornings a row of filthy, stinking, open garbage barrels and boxes may be seen upon either side of the street waiting for the collector to come along and remove their contents.

They are placed at the curbstone on the collection days, perhaps at five or six o'clock in the morning. The collector may get around before noon to gather their contents, and he may not. On an average, they stand for a period of five or six hours, fuming and stewing in the heat of the summer sun—an unsightly picture, a menace to the health of the passers by, and a shameful disgrace to the city in which such a condition of things is allowed to occur. This picture is not overdrawn, and I doubt not its parallel can be found in most of our larger cities.

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No matter what process is employed by a city for the destruction of garbage and refuse, the inhabitants in the vicinity of the works will bitterly complain of it as a nuisance, and rightly so, too, unless extra precautions are taken to keep the premises in a state of cleanliness, and to have ample provision for the immediate reception and disposition of all refuse that is brought to the place. Under no circumstances should garbage and other nuisance producing refuse be dumped on the ground or under sheds about the premises. Immediately on being brought to the works, it should be dumped at once from the cart or wagon into the dryers or furnaces, and not a pound of it be allowed to accumulate in and about the building. If this were done, I am quite satisfied that the multitudinous complaints about these places being colossal nuisances would grow rapidly and beautifully less. But so long as the arrangements for receiving and disposing of refuse remain as defective as they have been, and are, in most of the works, these complaints will multiply, and ere long the prejudice against them (the works) will become so deep-rooted that it will be well-nigh impossible to eradicate it.

WHAT IS THE BEST WAY TO COLLECT AND REMOVE THE WASTE OF TOWNS AND CITIES, AND WHAT DOES IT COST?

BY COL. W. F. MORSE, NEW YORK.

This inquiry is frequently addressed to those whose business relations bring them into association with the civic authorities of cities and towns having in charge the business of collecting and disposing of garbage. They are questions which are being presented by a great number of places which heretofore have ignored the subject, and now find themselves compelled to give it attention. They are questions more easily asked than answered, and however much care

and time may be employed in endeavoring to solve this municipal problem, there will still remain a vague and unsettled feeling that no definite and positive conclusion can be arrived at. The scavenger service of a city or town is one which involves a considerable, and in some cases a very large, expenditure of money, the control of a large force of men, the care of an expensive equipment of teams, horses, stables, etc., and the great responsibility of the public comfort, its cleanliness and health.

Every other department of sanitation has been animated by a spirit of inquiry and investigation, which has led to the expenditure of great sums of money in trials of inventions, the publication of numberless volumes of theory, of many experiments in the ventilation of dwellings and buildings, of strenuous efforts to obtain the purest and most bountiful water-supply, of ordinances and laws to prevent the adulteration of food-products and supplies, and the building of elaborate systems of sewers. All these questions have received attention, but the subject of the cleanliness of the community, as affected by the presence of all classes of waste and refuse, and as governed by the more or less perfect or imperfect system of collection, removal, and disposal of all this waste, is a matter which has been left to care for itself in a great majority of places. Not until the civic officials are driven by the complaints and remonstrances of the public, and by the presence of an absolute and pronounced nuisance in their midst, do they take any effective step towards giving relief.

The method at present in use in most of the cities of the country appears to be an outgrowth of the crude and imperfect way which was originally employed when these places were small towns and villages. In the beginning, every person was allowed to dispose of his own refuse in his own way, and by common consent all waste matters were deposited in the back yards, by the kitchen doors, or in some outlying place—out of sight if possible, out of mind in any event—and no care was taken to destroy or cover it. In a short time there appeared, on the surrounding line of these towns, piles of waste matter, unsightly, unsanitary, and obnoxious. These accumulations presently became mounds of rotting refuse, giving off stenches and offensive gases, the breeding-places of the lower forms of animal life, which, even when covered over with earth, if used for the location of dwellings, formed a starting-point from which radiated infectious diseases.

Being without any sewage facilities, these villages and towns used the privy vault as the only place for the reception of human organic waste, and annually or oftener the contents of these vaults had to be excavated and taken away. This work, disagreeable and filthy in itself, fell into the hands of parties having only the lowest order of intelligence, was performed usually without any oversight or attempt at disinfection or sanitary precaution, and they were at liberty to dispose of this offensive and dangerous matter in any way that best suited themselves, provided public attention would not be too much attracted by their methods. As the place increased in population, so these methods of garbage and night-soil collection and disposal were simply extended to meet the requirements. There would be, possibly, an attempt at some oversight or supervision of the process, a policeman would have power to arrest offenders who made too public an exhibition of their refuse dumps, and occasionally the night-soil con-

tractor would be fined for poisoning the earth and air which belonged in common to the community. This, in effect, is the way in which nine-tenths of the cities and towns of the United States deal with this question of garbage and night-soil collection and disposal. Evidently there is need of reform, of the institution of better methods, and of the substitution of strict rules, in place of unlimited license in this direction.

The *amount* of garbage and waste to be collected is an interesting question. According to the report of the commissioner of street cleaning for the city of New York, the amount, per capita, of garbage, refuse, street-sweepings, and ashes yearly collected in that city, is about one cubic yard to every inhabitant. This takes no account of night-soil, which is carried off in the sewers. This estimate has been found by experience to be very nearly the quantity which is annually produced in the average American city. For purposes of a rough calculation it is easy to estimate one cubic yard per annum of refuse, garbage, and waste material generally for every person, and, while the kind or character of garbage may vary with the different localities, as a rule the amount which is annually produced will vary but little from this quantity.

The proportionate amount of the different classes of garbage is a question which can only approximately be arrived at. In New York it is estimated by the health authorities that in the winter season about seventeen per cent of the total of garbage collection of the city, and in the summer season about twenty per cent, represents the animal and vegetable matter liable to putrefaction, which is garbage proper. In New England, where the house offal, as a rule, is collected separately from all other kinds of waste, the average of six cities shows that the percentage of putrescible matter, as compared with the whole amount of garbage and refuse collection of the city, is about twenty-two per cent. In the Southern cities, where the colored population consume an enormous amount of vegetable food, making a proportionate quantity of vegetable waste, the summer collection of putrescible matter will amount to twenty-five per cent. of the whole amount of collection. In six Western cities the percentage of putrescible matter in the garbage collection is estimated to be about twenty per cent.

From the mean of these figures, which have been gathered with some considerable trouble and difficulty, it may be stated that about fifteen to twenty per cent. represents the amount of animal and vegetable matter which is putrescible in character in the ordinary winter garbage collection of a city, and about twenty-five per cent. in the summer and early autumn months.

WHAT IS THE BEST WAY TO COLLECT THE GARBAGE? IS IT BY THE CONTRACT SYSTEM?

By this method a city or town makes a contract with a specified party to collect in his own carts the garbage, ashes, and refuse, and convey the same outside the city limits. Often a contract is made with the same party to sweep the streets and to convey away dead animals. Contractors are required to make collections two, three, or six times a week; to make these collections in a tight cart which will not allow any wastings or droppings on the streets, to keep this

cart clean, not to allow it to loiter on the streets, and generally, according to contract, to perform the work in a way that is satisfactory to the department and to the sanitary inspectors. In almost every case the Health Inspectors' Department is at war with the contract service from the beginning of the work. Competition often brings the price down to such a figure that a very narrow margin of profit is left for the contractor, and this means not a sufficient number of teams and men to do the work, an evasion or non compliance with the requirements of the city, or—a financial loss. Inasmuch as his object is to get over the ground quickly, to collect the smallest amount of garbage at the greatest price that he can get and keep just within the rules of the inspection service, unless he is vigilantly watched the contractor is very apt to instruct his men to hurry with their loads, to cover the allotted route quickly, and to get through in the shortest way possible. There is no special need, in his estimation, of keeping his carts clean; therefore there is always an effluvium surrounding these vehicles which heralds their approach. There is rarely, if ever, any attempt on his part to enforce the regulations of the city requiring deposit in separate vessels of garbage, ashes, and waste, and here is the critical place at which all well digested systems of improvement, the elaborate ordinances passed by cities, and the care and painstaking of its sanitary department, break down, and are of no effect or use, unless the contractor will coöperate with the authorities, instruct his men, and see that they carry out his orders of refusing to take putrescible matter when mixed with ashes. The pressure upon the contractor's employés to take whatever waste is set out from the household, the temptations offered by a 'tip' or by persuasion of the householder to "take it away just this once," are so great that the usual result is a load of mixed garbage and refuse, ashes, and everything else, which no earthly power can thereafter separate into its constituent parts, nor wisely provide for the disposal of.

It has repeatedly occurred, that cities which have established a plant for the cremation of garbage have had difficulty and annoyance in satisfactory operating this plant because of the wilful negligence of the contractors, or persons employed in collection of garbage, in refusing to assist in the enforcement of the ordinance requiring a proper separation by the householder.

It is the object of the contractor to do the least work and get the most money out of it; and from the nature of his occupation, and from the fact that he is dealing with worthless material, every man's hand is against him, and he has no inducement, except the bare fact of a money recompense, to give thoroughly good service. As a rule, he selects for his place of final disposal a dump as near as possible to his field of collection, and here he continues to throw every kind of abomination until driven out by indignant neighbors, when he migrates to some other point.

Under his system of dumping, at points near the city lines, the matter which he removes from the city is daily hauled over by people (men, women, and children) possessed with the idea that a garbage-dump is a gold mine, requiring only to be thoroughly dug over to make the digger wealthy. As a natural result, quantities of worthless stuff are picked up, carried back into the town, to be again discarded and taken away by the contractor, and again carried out. Whenever it happens that a bit of cloth, an old garment, or any material which has been in contact with persons ill from contagious or infectious diseases, finds

its way into this garbage-dump, it almost certainly happens that this is found by some woman or child, and, under the guise of "rags," is taken back into the city, to become a new plague-spot and breed a new attack of infectious disease.

This practice of allowing persons to pull over and recover from dumps articles which have been thrown away is one which should be strictly prohibited, and the prohibition enforced by every community which has any idea of caring for the protection of the health of its people. The spread of diphtheria has been traced directly to this practice, and no amount of warning ever seems to be of use.

NIGHT-SOIL COLLECTION.

Whenever a city or town has only limited sewerage facilities, the night-soil contractor becomes a man of some importance. The knowledge that organic waste of the human body has always been and always will be a poison to be guarded against, is a sanitary maxim which is slowly but surely making its way in the minds of the great public. Hence, it comes about that the removal of the contents of vaults and privies is done oftener now than in former years, and that the arrangements for the removal and disposal of waste of this kind have assumed of late years an importance which was far from belonging to them heretofore. Under the contract system employed in most places, a party is licensed to remove night soil; he is authorized to ask only a certain amount or sum of money proportionate to the amount excavated; he is obliged to use a specified form of sealed barrel, and is supposed to keep these in a cleanly sanitary condition. He is required to do the work only at night time, when it is supposed that the least offence would be given to the smallest number of people—and there the requirements stop. The ultimate disposition of this mass of dangerous material is left to his own fancy. Being under no special oversight or regulation as to disposal, he takes it to some point where it is moderately certain he will not be detected—nominally outside of the city limits, but oftener within its border—and digs a narrow pit in the ground and deposits it therein; or, he may contract with a farmer to scatter it upon the surface of the ground, to be supposedly ploughed under; or, he may, as is done in some Northern cities, collect, at some short distance away from the boundary of a city, an enormous reservoir of this offensive material, and, by treatment with muck, earth, or tan-bark, allow it gradually to become deodorized and inoffensive.

Several years ago there were a number of establishments in this country for the manufacture of poudrette, a form of commercial fertilizer the basis of which was night soil. The business was prosecuted with vigor, as it was supposed the returns would be very large, the principal ingredient costing nothing except the trouble to haul it to the factory. But it was presently discovered that the exceedingly offensive material with which they had to deal, united to the great cost of manipulating it into a form which could be handled without nuisance, exceeded the value of the fertilizer when manufactured; and the business was run at a loss, and given up. In other words, the present state of the fertilizer business in this country, and the great variety of articles which are useful at moderate prices for the enrichment of the soil, do not allow the profitable manufacture of compost from organic waste.

In a similar way there have been, and are now, many attempts to produce a valuable product from garbage. It is customary at many places to haul out upon the adjoining farm-lands the putrescible animal and vegetable matter, ashes, etc., of the garbage collection, and to plough into the soil all these constituent parts that can be subjected to such process. This may operate as a means of getting rid of garbage, but as a process for the betterment of the soil for producing food-products it is a great mistake.

The best evidence on file from the agricultural experiment stations of the country, and from the reports of scientists abroad, is, that garbage in its raw state is not a fertilizer, and does not enrich the land. Moreover, there is a very strong and warranted prejudice against using the products of a garden which have been grown by the direct application in its raw state of night-soil and garbage as a fertilizer; and the statement has been made by those whose sphere of observation has been exceptionally good, that certain classes of vegetables betray by their taste and odor the presence of the nitrites upon the ground in which they were raised.

The collection, removal, and disposal of garbage for municipal corporations by contractors may be fairly successful under certain conditions, where heavy bonds can be exacted and strict oversight and inspection maintained; but as a general rule, the experience of the American cities has been to the effect that the contract system is unsatisfactory and objectionable.

THE MUNICIPAL SERVICE.

The other method of collecting and removing garbage is where the municipal authorities undertake the whole service. It requires the investment of a considerable sum in teams, apparatus, stables, etc., and the employment of a large number of men. But these teams and men can be, and often are, used for other branches of the municipal work, thus dividing the expense. The inspection service can be more exactly performed, and the responsibility for the cleanly and efficient collection from the household can be more exactly placed. The householder, if his garbage is not taken away, has a means of redress by applying directly to the city authorities, and they in turn know precisely whom to blame for the neglect, and are thereby enabled to apply immediate remedy. There is no referring a matter to a contractor, who refers it to a foreman, who interrogates the man who drove the cart—thus filtering through three different channels and arriving nowhere at the end. The responsibility of employés, when they are the servants of a city, is greater than when they are working for a private contractor. Their terms of office are more stable, being dependent on their personal behavior. They are more apt to take pride in the efficiency and appearance of their teams, and it is certain that, under proper inspection, they do vastly superior and more thorough work. The responsibility for the cleanliness of the city comes directly upon the officials having control. The householder feels as though his interests are being better looked after, and that his complaints are more quickly attended to and more promptly redressed.

A comparison of the reports of health officers of the different places in the United States affords positive evidence that the contract system is inferior to the method of direct control of the collection and disposal of garbage by the city or

municipal government. Several of the larger cities, which heretofore used the contract system, are now about to resume direct control of their garbage collection; others, where the contract system is still in force, have before them the strong recommendations of their health officers that the contract method be set aside in favor of municipal collection.

The whole weight of evidence from experience and observation is directly in favor of the collection of the waste of a city or town by its own teams, under its own inspection, rather than by sub-letting to a contractor. There is, moreover, a better oversight of the final disposition of garbage when the city authorities are directly responsible for its disposal, since continual inspection is maintained down to the place where carts are dumped, and where the pile of refuse matter is finally deposited. It will not do to take away the household waste in a thorough way, in clean, covered carts, to transport it through the streets so that no chance of offence can occur, and then allow it to be dumped at some point where it will give offence to people surrounding, or may become a source of danger as the future foundation of streets or dwellings.

A perfect collection system will include—

1. The division of the city into wards or districts of convenient size for collection and thorough inspection.

2. The appointment to each district of a sufficient number of sanitary inspectors, and of carts and men for the collection of garbage and refuse. In the summer-time, in this climate, a daily collection of household offal and garbage is almost a necessity. Under the hot sun, decay begins from the instant that any surface of raw vegetable or animal matter is exposed to the air, and goes on to a point where putrefaction renders the article offensive and obnoxious. But the point of decay which makes garbage offensive is not reached for some hours. Fresh garbage, meaning thereby animal and vegetable matter which will decay, is almost odorless, and, when in this fresh state, can be collected and hauled and deposited without any nuisance, provided the householder's garbage receptacle is kept clean, the cart in which the garbage is conveyed is thoroughly washed and disinfected, and proper care is taken to cover or enclose the carts in such a way as to prevent the escape of any of the material. Therefore a daily collection is always advisable during the heat of summer, unless the amounts are very small.

3. The issuing of a printed notice or circular, to be given to and posted up by each householder, containing information of the time when the garbage collection will be made at this particular place, and specifying definitely the description of vessels in which garbage, refuse, sweepings, and all waste matter will be received. This ordinance should provide a penalty against the depositing of ashes or non-combustible material in garbage receptacles. The householder will be instructed to provide a second vessel, which would contain the ashes and non-putrescible articles, the collection of which should be made by separate teams.

4. The city should provide for the collection of the ashes and refuse material once a week in summer, and two or three times in winter, as may be required. The quantity of ashes in the garbage collection of a city or town, as a rule, is more than one half of the whole amount of waste in winter, and less than one fourth in the summer season. The object of the municipal regulations is to get

these ashes for the city's use in filling lands and grading streets, and this can only be done by a strict enforcement of the regulations as to separation, and a continual inspection of the collection carts.

5. The collection cart should be, as a rule, of a capacity to hold one or one and one half cubic yards. Experience has shown that the cubic yard is the most convenient and available standard of measurement for city refuse. It is exceedingly difficult to tell the weight of a given quantity of waste, which may include a vast number of different articles or substances, each unlike the other. There is a standard of measurement by weight for household offal, which can be very nearly arrived at where this is kept separate from every other class of waste. One and one-fourth cubic yards of garbage composed of household offal or "swill" will weigh 1,600 pounds, or a cubic yard will average about 1,200 pounds where it is mixed with the average quantity of liquid. On the other hand, three yards of garbage mixed with dry refuse might not weigh more than 1,200 to 1,500 pounds, so that, in computing the waste materials of a city as a whole, the cubic yard is the most convenient and most accurate standard of measurement. This collection cart, drawn by one horse, should be provided with a cover which closely confines the material and does not allow it to become scattered on the street.

6. An accurate account of the number of loads should be exacted from each driver, and thereby each man would be compelled to do his full quota of work. With a little experience it is easy to arrive at the quantity of garbage which a given number of people will produce for each season of the year, and economy of transportation and labor is maintained by keeping an accurate account of the amount collected. At the end of each month these separate numbers are collected and tabulated, and the report made to the proper officer. This system of garbage collection, under the inspection of the health officer of the city, who has, through his inspectors, absolute power of compelling the most thorough work, is the only one which will insure a cleanly, economical and satisfactory gathering of the worthless waste and refuse of any community.

The collection of night-soil is a matter which is still more important, if possible, than the garbage collection, and one which, as a rule, receives less attention from the city authorities. Where a town or city is extending its sewer area, the matter of the vault or night-soil collection becomes of decreasing importance. Usually the regulations require that all new houses built upon the line of sewer shall be compelled to connect with the sewer, and it should be made imperative for every householder to do away with the privy-vaults and connect with the sewers whenever practicable. Modern sanitation has shown clearly that the larger number of the zymotic diseases are due to the contamination arising from the presence of the organic waste of the human body. Epidemics of diphtheria and typhoid are, as a rule, directly traceable to the poisoning of the water-supply and the atmosphere by the emanations arising from the defective sanitary arrangements connected with privy-vaults. The reports of health officers of cities and state boards of health are filled with protestations and warnings, pointing out the fact that the people are being poisoned by allowing vaults and cesspools upon the land which is occupied by dwellings, or where wells are sunk in proximity to them.

The final disposition of the contents of privy vaults is a matter which requires

the wisest care. Too often it happens that the vacant ground in the immediate vicinity of growing towns and cities is honeycombed with great pits containing vast amounts of organic waste, which become, when the ground is needed for purposes of dwellings, a positive danger as a source of infection. The soil takes up only such liquid particles as can slowly filtrate through it, the great bulk remaining very nearly in the same state as when deposited. At one of the government posts, where it was necessary to excavate the ground for foundations for new barracks, it was found that vaults that had been filled twenty years ago were in very nearly the same condition as on the day that they were covered over, no oxidation having taken place. In digging the earth for the foundation of a large block of buildings erected in one of the older New England cities, it was necessary to excavate the ground which had been covered by a house used as a dwelling for over one hundred years. An old privy-vault, dug at the time of the erection of the first house, and which had been covered over and not in use for a great number of years, was uncovered, and the contents were found to be in almost the same condition that they were on the day the vault was covered over.

* * * * *

The report of the census of 1890, as contained in bulletin No. 82, upon the receipts and expenditures of the 100 principal cities of the United States, contains some very striking facts in this connection. It appears that while the "total ordinary expenses" in these 100 cities is \$235,064,127, the amount reported as expended for the purposes of "health" amounts to the sum of \$2,280,317, less than one per cent. of the sum of the "ordinary expenditures" of each year. Taking examples out of a list: A wealthy New England city, whose annual expenditures are nearly a million, expended for the "health department" less than three-tenths of one per cent. of the total sum; a Western city, expending nearly four hundred thousand dollars, paid about one-twentieth of one per cent. for "health." Thus, the support of the department which has the care of the public health, the prevention of epidemic diseases, and the removal of nuisances, receives, by far, less money than any other department of municipal affairs.

An attempt has been made to bring together statistics of the cost of garbage collection, which might convey some adequate idea of the expenses attendant upon a thorough system under municipal control, but the information obtained is of so varied a character that accurate figures are impossible. Taking the largest city in the country, New York, as an example, the last report made by the Street-Cleaning and Garbage-Collection Department shows that in a population of one and one-half million of people, one and one-half million loads of garbage and refuse were collected, each load being about one cubic yard, and that the cost of collection and disposal of this amount was 81 cents for each cubic yard. This included the sweepings of the streets, the collection of ashes, and the collection of garbage and refuse, but had no reference to any sewage matter. The report also shows that about 18 cents represented the cost of disposal, taking a part on barges and dumping-scows about 22 miles by water and dumping it into the ocean, and disposing of the remainder behind bulkheads to fill low ground in the vicinity of the city.

It was expected when this paper was begun, that statistics of the cost of col-

lection for the cities of this country, based upon the number of cubic yards collected yearly, could be obtained, but it has been found impossible to proceed in this way, as the records of amounts collected, except vague statements of "cart-loads," are not to be had.

But following the rule for computation suggested by the health officers of Providence, R. I., who state that $15\frac{1}{2}$ cents per capita represents the annual cost of garbage collection in that city, then a table of approximate costs for several cities can be constructed.

Boston pays 22 cents per capita, and sells enough garbage to reduce this to 17 cents;

Chicago,	24 cents.	New Haven,	$8\frac{1}{2}$ cents.
Memphis,	31 "	Haverhill, Mass.,	$5\frac{1}{2}$ "
Keokuk, Ia.,	25 "	Newport, R. I.,	20 "
Los Angeles, Cal.,	27 "	Charlestown, S. C.,	18 "
San Antonio, Tex.,	30 "	Lynn, Mass.,	12 "
Montreal,	11 "	Milwaukee, Wis.,	17 "
Detroit, Mich.,	17 "	Toledo, O.,	13 "

Washington has paid 6 cents up to the present time, but as this amount was too small to reimburse the contractor, he has stopped, and the city is collecting its own garbage, at an estimated cost of \$40,000 per year, or 17 cents per capita.

THE MERZ OR VIENNA SYSTEM.

By EDWARD CLARK, M. D., BUFFALO, N. Y.

"The Merz" or "Vienna" system, as it is sometimes called, for the disposal of garbage and refuse, is in use in six or seven cities of the United States. By this method the garbage is not cremated, as has been erroneously supposed by many, but is subjected to a process more nearly akin to desiccation. The garbage and refuse, when first received, is placed in closed retorts or dryers, where it is subjected for some hours to a high temperature, by means of which it is completely dried. This dried residue is afterwards treated by means of a chemical solution which extracts all of the oils therein contained. This, in brief, is the entire process, but a more detailed explanation of the works and the machinery employed will be necessary in order fully to understand just how the work is done.

By means of a runway or elevator, the garbage wagons are taken to the second or receiving-floor of the building, and at once the garbage enters tightly closed receivers, from them it passes down through hermetically closed chutes into what are known as the dryers, which are placed horizontally just below the receiving-floor. These dryers consist of concentric cylinders, one within the other. The inner cylinder receives the garbage and refuse by means of the chutes from the receiver, as above stated, and in its interior is a steel reel provided with innumerable square arms connected on top, which, during the pro-

cess of drying, is continually revolving in the longitudinal axis of the dryer. The outer cylinder is nothing more nor less than a jacket for the inner one, and is covered with Asbestos for the purpose of retaining the heat. Between the two cylinders is a chamber into which superheated steam is admitted at a temperature of about 300° F. Each dryer holds about three tons of garbage, and after being filled and closed the steam is turned on, and six hours occupied in the drying process. During this interval it is stated that the garbage loses about sixty per cent. of its weight, and becomes thoroughly dry. This large percentage of weight passes off in the form of watery vapor through combination condensers so constructed as to destroy all gases that will yield to water or fire, as well as those requiring both elements for complete destruction, and thence directly into the sewer. The dryers are emptied by means of steam-tight doors in the bottom of the cylinder, and their contents are carried at once by means of conveyors to the extractors.

"The extractors are square upright tanks with a false bottom," in which for a period of six hours the product of the dryers is subjected to the action of a chemical solution, benzine being most generally used, and "by means of which the oily constituents are wholly removed." The benzine is then recovered, and the dry residue is removed from the extractor. Dead animals are treated in separate dryers, which are precisely similar to those used for garbage, except that they have a special connecting pipe for filling. They are treated in the same manner, and subjected to the same process in the dryers as is the garbage.

Prof. Wm. M. Chauvenet, of St. Louis, has given much thought and attention to this matter, and in an exhaustive, able, and impartial report made to the council of that city, under date of December 10, 1890, after being directed by that body to visit and investigate the Merz plants in operation at St. Paul, Milwaukee, Chicago, Detroit, and Buffalo, concludes his report of investigation and study of the Merz system as follows:

"In reviewing, then, the many interviews and debates in regard to the Merz system, continuing through my days, I find the representatives of the several communities in which the Merz plants have been in operation universally in favor of its introduction. My own investigation, both sanitary and chemical, leads me to the following conclusions:

"1st. That the Merz system, from a chemical stand-point, is an ingenious and perfectly rational process.

"2nd. That it is a perfectly inoffensive and sanitary process for the conversion of offensive animal and vegetable refuse into an odorless and inoffensive product.

"3rd. That the complaints against the system are wholly due to the method of handling and delivering the garbage, for which the Merz system is in no way responsible.

"4th. That with proper methods of collection, proper steel dump-wagons, and properly arranged hoppers for the reception of the refuse, the Merz system will be perfectly free from objectionable features."

INNATE RESISTANCE TO DISEASE.

One of the most important subjects presented for consideration at the International Congress of Hygiene and Demography, in London, last summer, was that of the power of resistance to the invasion of disease or immunity from disease because of inherent bodily forces. Some of the foremost bacteriologists of Europe presented formal papers and entered into the earnest discussion of this subject. The theory of the phagocytic (or germ destroying) action of the leucocytes (white blood corpuscles) and the germ destroying power of the cells of the blood serum were ably defended. Until Pasteur introduced preventive inoculation by diluted or attenuated virus, the only known immunity or protection against any disease was a previous attack of the same disease—vaccination for small pox only excepted. Subsequently it was discovered that the leucocytes inclose and digest many kinds of foreign substances, including bacteria, and thus becoming phagocytes (destroying cells) whereby the microbes or bacteria perish by an absorption of a part of their substance, and thus quite differently from the manner in which death occurs from cultivation or by disinfectants. The rapidity with which these specific microbes, whether derived from direct virus or by attenuation, are consumed or destroyed by the leucocytes is a measure of the vitality or resisting power of the person or animal.

There are some persons or some animals in which the microbes remain free from resistance, or where germ destruction does not occur, which indicates that in such animals the protective cells are of insufficient power to accomplish a successful defense against the invasion, and these are the animals which are susceptible to the disease, and succumb to its power.

It remains a question whether immunity is due to the power of the cells to include virulent microbes, or whether it depends on the absorption of virus by them. Sometimes the inclosed microbes enjoy full vitality, and virulent bacilli grow within and escape from the dead leucocytes.

At others, where the microbes are beyond the reach of the leucocytes, as in the anterior chamber of the eye of a rabbit, they grow freely until the leucocytes migrating thither check them. Why are the cells attracted to the microbes, and why do the leucocytes in some, that is, in susceptible animals, fail to seize them? It is suggested that the leucocytes are attracted to the bacteria by a chemical quality or affinity, and it is believed that the products of the microbes also exert a very marked chemical action on the phagocytes. The more active the proliferation of the poison germs within the body, the more energetic are the poisons it elaborates, and the cells which penetrate the toxic focus are paralyzed and become incapable of interfering with the microbes. Sometimes, as in chicken cholera, the toxine formed is still more virulent and actually repels the leucocytes, so that phagocytes are never found in this disease. But in animals immune by attenuated virus, by a suitable dose of bacterial products, this does not occur. A fresh dose of specific microbes attracts phagocytes already habituated to the products of the same kind of microbes, which take up the microbes themselves before they can elaborate any effective toxic material.

The critical struggle is therefore at the commencement of the disease; for, if the leucocytes cannot accomplish this at the beginning, later interference would be ineffective, because enough poison would have been produced to paralyze them. Hence, any condition that prevents access of the leucocytes facilitates infection. On the other hand, in such diseases as relapsing fever, where crises occurred, the cells destroyed the sporilla in monkeys and there was no second attack; but in man the phagocytes were unable to completely overcome it and a new attack supervened.

And in tubercle and leprosy, where the bacilli actually live within the leucocyte and finally destroy it, it would appear that the power of the cell is limited to swallowing or inclosing the foreign body without digesting it. On the contrary, it is held by some that the prophylactic substances reside in the animal tissue juices. These bacteria-killing bodies are designated as defensive proteids, and is a theory that "immunity depends upon substances formed by the metabolism (tissue or nutritive changes) of the animal, rather than that of the microbe, and which are able to destroy either the microbe against which immunity is possessed, or the products upon which their pathogenic action depends."

This does not exclude other defences, and it is probable that in

some animals immunity may depend upon other causes. In support of this, it appears that the blood serum of a rabbit is a culture-medium for the bacillus pyogenus (pus bacillus), but when a rabbit is made immune against the disease produced by this bacillus, its blood serum has acquired the power of attenuating or destroying the microbe. Similar results have been attained in other diseases, and, especially in pig typhoid, not only have the microbes been killed by the blood serum of immune rabbits, but such serum has destroyed the disease. It has also been found that the microbes of diphtheria and tetanus do not pass through the system, or migrate: they remain localized, and the deadly poison they elaborate, absorbed into the system, produces their disastrous effects. For instance, an inoculated guinea pig may develop diphtheretic paralysis long after the last diphtheretic bacillus has disappeared; and practically the same clinical effect can be produced by injecting a minute dose of the poison made by the diphtheretic microbe as by the microbe itself. Scarcely any tolerance can be obtained by successive inoculations with minute doses of the poison generated by the diphtheretic microbe, and there is no prospect of producing immunity in that way.

Further, it would be useless to attack the microbe if the poison already formed remained untouched. But it has been found that while the serum of a diphtheretic immune rabbit has no bactericidal action on the bacillus, it does destroy the poison produced by it, and in this way the disease has been cured in mice and guinea pigs. This has been confirmed in other diseases also. In determining the nature of the substance upon which the bactericidal quality depends, it was suspected that it was a particular ferment-like proteid, known as cellglobulin B. In the serum of the rat an alkaline proteid having the power to destroy anthrax bacillus was found, and, when injected into mice along with fully virulent anthrax spores, it prevented their development. Other experiments showed that, in the rat at least, these defensive proteids can be diminished or increased at pleasure by suitable diet, and that the blood serum may fairly be believed to contain this valuable constituent. In corroboration of this, it may be, as Emmerich reports, that dysentery and croupous pneumonia in animals could be cured or prevented by sub-cutaneous or intravenous injections of immune blood, and he believes that, as Franckel's diplococcus causes croupous pneumonia, so men can be cured of that disease, when proper quantities of chemically-pure blood of artificially immune mice not only renders other mice refractory to tetanus, but cures the disease even after severe tetanic spasms have set in.

The defensive proteid or lexins, in which upon this theory these qualities reside, appear to be ferment-like albuminous bodies, which in the absence of other physiological tests, Mr. Hankin proposes to divide into two provisional classes—sozins, phylaxins. A sozin is a defensive proteid that occurs naturally in a normal animal. They have been found in all animals yet examined. A phylaxin (to guard) is a defensive proteid only found in an animal artificially made immune, and which, so far as known, only acts on one kind of microbe or its products. Each may be sub-divided into those that act on the microbe itself and those that act on the poison it generates, to be called myco (fungus) and toxo (poison) sozins and phylaxins.

As these may also be obtained from cells, they do not exclude the phagocyte theory. Metchnikoff, of Paris, and Hankin, of Cambridge, are the respective exponents of the phagocyte and defensive proteid doctrines. It is probably the case, as Emmerich remarked, that no general theory of immunity can be formulated now. Phagocytosis can be demonstrated beyond a doubt under the microscope, and the experimental work with blood serum seems to show that other factors than the amœboid operates to induce protection. It is reasonable to suppose that both the cell and the serum play important parts and that the chemical element is not yet made out.

Belonging to this last factor are Klein and Coxwell's experiments on the influence of chloroform upon immunity. Frogs and rats are ordinarily immune against anthrax; but when inoculated with it under chloroform or ether, both of these invariably die, although, so far as the microscope shows, the leucocytes continue to swallow the bacteria. This seems to show that the chemical changes may be established in the blood sufficient to neutralize the destructive power of the leucocytes.

SELF PURIFICATION OF RUNNING WATER.

The pages of the MONTHLY BULLETIN of this Board have not infrequently presented statements in relation to the self purification of polluted water, such statements having been derived from the results of experiments and investigations made by parties eminent in scientific work of that kind as well as in other lines, and also results of examinations of different waters in Rhode Island in the chemical laboratory of Brown University, and by the investigations of the Secretary of the Board.

In the pages of this annual report of the State Board of Health, the quality of the waters of the Pawtuxet river at different points, and at the faucets in Providence city, will be shown as ascertained by Prof. J. H. Appleton, and State Assayer G. E. Perkins.

As pertinent to the subject of self purification of river waters, the following paper is presented. It was published in *Le Journal d'Hygiene*, and translated for the Marine Hospital Bureau, Washington, D. C., and republished in the Abstract of Sanitary Reports of that Bureau.

“A recent issue of the *Annals of Experimental Hygiene* at Rome contains a paper by Dr. Alessandro Serafini on the spontaneous and rapid purification of running water from all deposits received during its passage through the centres of population. Dr. Serafini's observations appear to be in direct agreement with those recorded by the Royal Commission of London and the report made on the purification of the Seine; also with the chemical and bacteriological analyses made by Schelhaas of the water of the Isar, by Fleck of the Elbe, and by Celli and Scalla of the Tiber. They show that the quantity of organic matter, ammonia and bacteria, carried along by the water diminishes at a short distance from the point at which they are discharged into the stream, while the proportion of products which indicate the process of oxydation, viz : nitrous and nitric acid, increases. The following is a summary of the conclusions drawn by Dr. Serafini from his experimental studies:

1. Aeration by continuously renewed contact with the air does not prevent the development of micro-organisms in running water, and it is not, *per se*, suffi-

cient to accelerate the process of oxydation. Experiment shows that there is no appreciable and constant difference between water in which aeration is constantly renewed by the motion of the current and that in which aeration occurs under the influence of temperature or barometric pressure.

2. The transformation of organic matter takes place so slowly in water that it is extremely difficult to follow the process, either in the general flow of the stream or in any section of it which is made the subject of special analyses. While there is no doubt that nitrification is due to the bacteria in the water, some time must elapse before the process can be recognized, whether the water be flowing or stagnant, deep or shallow.

Light retards the transformation of organic matter by destroying the bacteria which are the essential factors of oxydation.

3. A temperature of 0° or -6° incontestably destroys great numbers of the bacteria and arrests the development of those which survive. For this reason water contains the minimum number of bacteria in winter.

4. In great masses of water a lowering of the temperature of the surrounding atmosphere does not necessarily exercise a destructive influence on micro-organisms. This explains the fact, observed in experimental research and in local observation of streams of rapid as well as sluggish current, that a gradual and continuous deposit of bacteria takes place.

5. The rapid diminution of the bacteria discharged into rivers from the sewers of cities is not due to oxydation occurring in the body of water, but to concurrence of several factors, viz : Sedimentation, dilution, the mechanical action of substances which are first held in suspension in the water, and then deposited, the movement and disturbance of the water, low temperature, the superficial filtration which takes place in the bed of the stream, and finally some inherent action of the water itself.

Purification from organic matter and the intermediate products of decomposition, is probably due to sedimentation and the slow and continuous oxydation occurring in the bed of the river. Water flowing over the river bottom dissolves the nitrites and nitrates formed in the zone in which sedimentation takes place. Sedimentation and dilution cause the rapid diminution of organic matter and ammonia, and solution facilitates the liberation of the nitrates and nitrites, the result of this double process being the purification of the water."

In addition to the above and as pertinent thereto may be presented a brief synopsis of a paper by Dr. Percy F. Frankland—an eminent authority—on "The Present State of Our Knowledge Concerning the Self Purification of Rivers," read at the International Congress of Hygiene at London in 1891.

"We have evidently placed too much confidence in the innate power of rivers to throw off the evil effects of pollution by sewage. On the other hand we find, if we may believe the authorities, some comfort in the fact that the bogey of the present day, the microbe, has not that miraculous vitality which popular belief has attributed to it, and is even to be disposed of by so commonplace a matter as sedimentation."

Dr. Frankland, in the course of his paper, refers more than once to the remarkable powers of self purification of the Thames. That our metropolitan river must practice this virtue to a prominent degree is manifest from the cruel ill-usage to which we subject it; but we gather that the author referred chiefly to the up-country reaches. Below-bridge, especially in the neighborhood of Barking and Erith reaches, no self purification could compensate for the filthy flood that is daily discharged at Crossness.

There have been reports of various highly-paid experts from time to time, the reading of which would lead one to suppose that there was nothing or little to be desired in regard to the state of the water in this region. But those who live near the banks, or whose duty takes them down the river, know how misleading these reports are. At low water especially, the banks are formed by reeking flats of sewage disposal.

Dr. Frankland's paper says nothing about the unsavory reaches below bridge, but commences by saying that the subject of the self purification of rivers admits of being considered from two perfectly distinct points of view, viz., from the chemical and biological aspects. Until recently the subject has only been discussed from the chemical point of view.

The firm conviction possessed by many that rivers undergo spontaneous purification in the course of their flow is generally based upon personal observations made upon streams, in which the process appears to be going on in such a striking manner that no analytical evidence is required. All engineers are acquainted with streams which are visibly polluted at one spot, and apparently pure a few miles lower down. When such cases are further submitted to analytical tests the latter, of course, fully confirm the previous ocular impressions. In fact, such disappearance of organic matter does take place; but when these cases of supposed self purification are carefully investigated, it becomes doubtful whether the phenomenon is due to much beyond dilution and sedimentation. The careful experiments which have been made to test this point are by no means numerous.

A series of investigations was made by the Rivers Pollution Commissioners of 1868 to test the point, both as regards highly-polluted streams and comparatively pure ones; but in both cases their results were of a negative character, and pointed to no real purifications, *i. e.*, destruction of organic matter, although there was distinct evidence of considerable improvement in the quality of the water through sedimentation.

Some years ago the author undertook a series of experiments to further test this point in connection with the Thames, which has always been regarded by some as a river possessed of most remarkable self purifying power, and which, undoubtedly, often does reach London after a long flow through a cultivated and fairly populated district in a surprisingly pure state. The experiments in question consisted in taking samples of the water flowing in the river at different points on the same day, with a view to establishing whether on the whole the chemical quality of the water was improved or deteriorated during the course of its long flow. Thus, on one day, samples were taken at Oxford, Reading, Windsor and Hampton; on another day at Chertsey and at Hampton, and on three different occasions samples were collected both at Windsor and at Hamp-

ton on the same day. The results of analysis on these various samples clearly indicate that the chemical quality of the water undergoes *slight* but almost continuous deterioration in flowing from Oxford to Hampton. This deterioration is in spite of a large increase in the volume of the water, a large proportion of which gains access to the river from springs in the chalk, and is of very high purity.

The author continues by saying that of the most recent investigations, we are led to the conclusion that sedimentation is the main cause of self purification in river water; of any *rapid* oxidation of dissolved organic matter there is still no reliable evidence, although of course dilution, which frequently takes place on the largest scale, as in the case of the Thames, without being suspected until made the subject of a most careful scrutiny, will produce a superficial appearance of such a result.

The removal of microbes by sedimentation during the flow of a river is unquestionably of great hygienic importance, and of much greater hygienic importance than the alleged oxidation of dissolved organic matter, which in itself can have no power of communicating zymotic disease; it is, however, a process which cannot be relied upon as furnishing any guarantee that harmful microbes, turned into a stream at a given point, will no longer be present in the water at any point lower down. From the numerous experiments which have been made on the vitality of pathogenic microbes in water, there can be no doubt that many forms which might have subsided would remain alive for long periods of time, and be carried down uninjured when the river was next in flood.

The author concludes his paper by saying that we must not allow sedimentation of microbes to cause us to relax our protective measures to exclude contamination from our streams, but on the contrary, bacteriological research clearly indicates on the one hand the value and importance of purifying by the very best available means all dangerous liquids, such as sewage, before admission into rivers, and, on the other hand, to submit the water drawn from streams for town supply to the most careful subsidence and filtration through sand before delivery.

SEWAGE DISPOSAL.

The question of sewage disposal received a very large amount of attention at the Congress of Hygiene and Demography. The question of the application of electricity as a means of purifying sewage, was a topic causing considerable discussion. It was, however, the unanimous opinion of the members taking part that the expense incident to such methods of purification preclude the practicability of its economical use under present known methods of application.

There were ten different methods presented by which the soluble and insoluble matters of sewage, deleterious or otherwise, could be disposed of, but the opinion was generally expressed that broad irrigation, on the whole, was the only one of all that could accomplish the desired purpose most successfully.

The separate system of disposal was quite generally admitted to be applicable in the largest number of instances, but even where it could be adopted, there were difficulties which could not be easily overcome.

The proposition of a combination of precipitation or subsidence, with chemical treatment and filtration, was accepted as presenting the best methods of partial or complete disposal, whether succeeded by irrigation or otherwise.

There was a very general approval of the Amiens process of sterilization by herring-brine and milk of lime.

In the processes of filtration by most methods it was admitted that the pores of the filters become clogged very rapidly, and while the coarser materials of the sewage are retained by the filters, a considerable part of the micro-organisms will be arrested and thereby enabled to increase enormously, while no inconsiderable number of the same will find passage through.

There was a unanimous acquiescence that under no circumstances should an effluent be allowed to enter any stream furnishing water below such entrance to families for domestic use until all specific organisms and suspected impurities are eliminated and the dissolved organic matters reduced to the smallest proportions.

No paper more concise and presenting methods therein more practicable for the disposal of sewage was issued, during 1891, than the report of a special committee to the Association of Executive Health Officers of the Province of Ontario.

Herewith is appended that part of the report having special relation to the

DISPOSAL OF SEWAGE BY WATER CARRIAGE.

1. The principle was adopted, that the soil-pipe in all cases be made of iron, and of such strength as shall cause it to be, and remain impervious to sewer gas, and that said pipe shall be continued to a point at least three feet beyond the outer wall.

2. The soil-pipe should be exposed to view throughout its whole length within in the house, and be continued through the roof of the same calibre and strength of material as below fixtures. The soil-pipe should be continued above the roof to a point at least five feet above any window within a distance of thirty feet, and its upper opening should be left uncovered by any hood.

3. All plumbing fixtures within the house be trapped, and all traps be ventilated by separate ventilation pipes connecting with the outer air directly, or into the soil-pipe, at a point above the highest fixture.

4. No closet or other contrivance which permits of accumulation of gas in any part of it should be used within a house, and all should be supplied with a sufficient quantity of water to keep them clean and well flushed.

5. That at the point at which the soil-pipe ends below outside the house, it should be connected with a glazed tile, by a well-made Portland cement joint. This house sewer should be continued to the street sewer, and be connected therewith by a properly constructed connection.

6. That in all places having or constructing systems of sewerage it is desirable that the sewage be delivered at its outfall separately from storm water, in order among other reasons that the economical and profitable utilization of it may be possible. Therefore it is recommended that the separate system, or the restricted separate system of sewerage, be adopted wherever practicable.

7. That the most desirable method of disposing of sewage is by land irrigation, wherever this is practicable. This method is especially important for cities and towns situated inland, or on such rivers or streams as are or may be used for public water supplies.

8. That in order to have the most successful results in any method of disposal of sewage on land, the following points require to be observed:

(1) That the amount of sewage daily delivered at the sewage farm be maintained at as uniform a quantity as possible, in order that the necessary area of land for thorough treatment of it can by experience be calculated.

(2) That the best class of soil available for the purposes of a sewage farm for any town be carefully selected, in order that effective treatment of the sewage can be carried out.

(3) Experience has shown that the soils best suited for sewage farms are those in the following order:

- (a) Coarse gravels of a calcareous character.
- (b) Coarse sharp sand, more or less calcareous.
- (c) Gravelly loams with gravel sub-soils.
- (d) Black loams with gravelly sub-soils, where sewage has been previously treated with lime as a precipitant.

(e) Burnt clays have been used, but solely as filtration beds.

(4) The location of the farm as regards possibility of conveying sewage by gravitation or by a minimum amount of pumping will naturally be sought.

(5) The character of the surface configuration of the farm to the end that the preparation of the surface may be economically carried out ought to be carefully studied.

9. In the preparation of the sewage farm, the following points require attention:

(a) The farm should be efficiently under-drained, whatever method of irrigation be adopted.

(b) In towns where there is a combined system of sewerage it will, in most cases, be found necessary to dispose of the sewage in part by broad irrigation. In this method the surface requires only a general grading in order that the flooding of the tract may be properly regulated from the surface distributing main conduit.

(c) In towns where the separate system has been adopted, it will generally be found practicable to obtain land on which to treat the sewage by the flat bed system of surface irrigation. In the flat bed irrigation method, it is of prime importance that the surface of each bed be graded so as to be practically level, and the intervening corners and ditches be similarly graded, so that no unequal amount of sewage will be deposited at any point in them.

(d) The application of the sewage to the land under any method of sewage-farming must be made intermittently, or with an interval more or less long, according to circumstances, between each application of sewage.

(e) In order that a maximum amount of sewage may be applied to the farm without causing a nuisance, it is necessary that the sewage be applied to the land in a fresh state.

10. The capabilities of sewage farms for the economical disposal of sewage will depend primarily upon the points already indicated being adhered to as far as circumstances will allow; but the mechanical appliances available at the present day, especially the utilization of wind-mill power, vapor engines, etc., will materially facilitate in limiting expenditures in those places where daily cost must materially affect the extent to which irrigation can be adopted. Carried.

11. Inasmuch as it has at times been found necessary (especially in older countries where the land is expensive and the best land for sewage farms is not always available) to concentrate the sewage, some method of precipitating the suspended organic portions of it has to be adopted.

In most instances the use of lime will be found the cheapest precipitant where the sludge is treated daily; but where this is not always possible, the use of iron salts, which lessen the tendency to putrefaction, and to some extent the quantity of sludge has been found of service. A recent application of the latter process

is by the passage of electricity through iron plates placed in the sewage current, by which the iron is applied effectively to the sewage.

12. In every instance, however, where the town to which sewage disposal is applied is situated on a lake or river whose pollution may possibly affect a public water supply, it is found necessary with every precipitation method, to cause the passage of the effluent from the precipitation works to a land area for filtration. (Signed), J. Coventry, chairman; E. Griffin, T. Macfarlane, C. E. Horet-sky, P. H. Bryce, A. Macdougall, C. H. Rust, A. Blue.

PHYSIOLOGY AND HYGIENE IN THE PUBLIC SCHOOLS.

Chapter 415 of the Public Laws reads as follows:

SECTION 1. "The school committees of the several towns shall make provision for the instruction of the pupils in all schools, supported wholly or in part by public money, in physiology and hygiene, with special reference to the effects of alcoholic liquors, stimulants and narcotics upon the human system."

Occasion has been taken from time to time during the last five years, to ascertain, by personal inquiry and by mail, to what extent and by what means the letter and spirit of the law as above quoted, have been complied with.

It has been found that in some of the rural districts, instruction in physiology and hygiene has been rather meagre. But for much the larger number of the schools there has been a growing interest on the part of the town and city superintendents (from whom the determining movements and impulses must in most cases originate and be efficiently continued), and also on the part of the district committees, which are favorable indications of more extended and more thorough courses of instruction in that department of education, in the coming years now close at hand.

As the Normal School and the public schools of the cities, are the exponents or representatives of the best and most complete courses of instruction, adopted or employed in the public schools of the State, the reports of the superintendents of such schools in relation to the means and methods of teaching physiology and hygiene are herewith appended.

THE STATE NORMAL SCHOOL, PROVIDENCE, R. I.

CHAS. H. FISHER, M. D.,

Sec'y State Board of Health:

DEAR SIR:—Principal Littlefield has passed to me your letter, requesting me to answer it, as physiology and hygiene belong to my department.

No change has been made recently in the course or in the methods of instruction in hygiene. During half of the first term of the course—ten weeks—all

students not high school graduates, unless excused on examination, study physiology and hygiene. This is with the view of giving them, as early as possible, the fundamental principles and of leading them to form, or reform, physical habits which may promote their health and the development of a sound constitution.

The subject is taken up for fuller study at the beginning of the senior year in connection with zoölogy, after twenty weeks study of botany. The study of botany is made largely the study of structure and physiology as a foundation for animal and especially human physiology. The time which is given to hygiene is too brief, but with the preparation in general biology above indicated our students are able to take under consideration the most important topics of general and school hygiene and give some attention to sanitation in the home and the school.

It is hoped that very soon the course may be slightly modified so that a full term during the senior year may be given to physiology and hygiene.

Very respectfully,

W. E. WILSON,

Teacher of Physics, Biology, Etc.

OFFICE OF SUPERINTENDENT OF PUBLIC SCHOOLS, PROVIDENCE, R. I.

CHAS. H. FISHER, M. D.,

Sec'y State Board of Health:

DEAR SIR:—The public schools of Providence use Dr. Blaisdell's Series of Physiologies. His first book, the Child's Book of Health, is used during the fourth, fifth and sixth years of school. The pupils read the book, having usually one lesson each week, and are questioned upon the lessons read. The second book, "How to Keep Well," is used during the seventh and eighth years in much the same manner as the Child's Book of Health. These books are owned by the city and loaned to pupils. The third book, "Our Bodies and How We Live," is purchased by the pupils at the beginning of the ninth year, the last in the grammar school course, and is carefully studied and recited in four or five lessons each week for thirty weeks of this year. The entire book is taken up. Many compositions are written by the pupils upon the topics of the several chapters. Each class has Taggy's Anatomical Charts, and some of the classes obtain anatomical material from the markets abundant for illustration.

During the first three school years the teachers use "Physiology for Young Folks," as a guide for oral work.

Yours respectfully,

H. S. TARBELL.

OFFICE OF SUPERINTENDENT OF SCHOOLS, PAWTUCKET, R. I.

C. H. FISHER, M. D. :

DEAR SIR:—The regulation regarding physiology is to devote 15 minutes each two weeks to the study.

In the three primary grades we have a regular course laid out, and the time given to it is more than that required. In the other grades we have been hard at work bringing the schools up to the grade of the new course of study in the regular subjects, and I have not felt it right at present to push the physiology by one who is working so hard to get the regular work into shape. I am an advocate of the law, and shall put it into full and active operation as soon as the other matters are in proper shape.

Respectfully,

H. M. MAXSON.

OFFICE OF SUPERINTENDENT OF PUBLIC SCHOOLS, WOONSOCKET, R. I.

CHARLES H. FISHER, M. D. :

DEAR SIR:—Instruction in hygiene is given in all of our schools from the lowest primary to the high school.

The Pathfinder, Nos. 1 and 2, is on the teacher's desk in all the primary schools, and oral instruction, covering the contents of the book, is given throughout the year.

In the grammar grades Brand is used as a regular text book, with one or two lessons a week. The book is finished before the pupil enters high school. In the high school one term is given to the study.

Respectfully yours,

F. E. McFEE.

CITY OF NEWPORT R. I., DEPARTMENT OF PUBLIC INSTRUCTION,
OFFICE OF SUPERINTENDENT OF SCHOOLS.

DR. CHARLES H. FISHER:

DEAR SIR:—In Mr. Baker's absence, I have tried to gather some facts in relation to instruction in hygiene. I find, by consulting our teachers, that they go into the subject of hygiene more deeply each year. In the grades below the grammar (fifth year) no text book is used—all the instruction in hygiene is given in "familiar talks." In the grammar grades, the little book by Blaisdell, "Our Bodies and How We Live," is used as a regular text book and several supplementary readers that contain matter germane to the subject are read. One teacher writes me that by the use of colored charts she is able to show the effect of alcohol on the system, and that the pupils under her care are much interested in the talks that she gives regularly upon the great need of care for the body in all particulars.

In the first grammar class, last year, the following subjects have been studied thoroughly during the year: (a) bones, (b) muscle, (c) circulation of the blood, (d) breathing, (e) skin, (f) nervous system, (g) five special senses.

The teachers spend from forty minutes to one hour per week on instruction of this kind.

Very truly yours, for the Superintendent,

REBEKAH K. BOSWORTH, *Clerk.*

CONTAGIOUS AND INFECTIOUS DISEASES OF ANIMALS.

GLANDERS.

During the year, 1882 inspections of horses were made for the purpose of detecting cases of glanders or farcy. They consisted of team, market, hack, railway, carriage and farm horses in the various cities and towns in the State. One third of these were found at the State and County Fairs.

The number reported and condemned as having glanders or farcy or both was 88, as against 145 the previous year.

They were found in the following localities with the number in each stated: Providence city, 60; Pawtucket, 8; East Providence, 6; Cranston, 3; Warwick, 2; Newport city, Johnston, Cranston, Scituate, Westerly, Warren, North Providence, Cumberland and Coventry, 1 each.

The steady introduction of horses into the State from sections of the country, north and west, where they are raised for the market, and where glanders are prevalent, makes continued and active vigilance absolutely needful to restrict and keep within bounds this virulent and always fatal disease, a disease which is a standing menace to property investments in that noble and indispensable animal.

TUBERCULOSIS.

At the adjourned July Session of the General Assembly an act was passed making it the duty of the State Board of Agriculture to give attention to reported cases of suspected tuberculosis. That Board was authorized to allow compensation for loss on animals killed by order of the Board or its agents, (which had not theretofore been allowed) and with the result of a larger number of animals being reported as suspected of having the disease. As that board will report proceedings in due time, reference may be made thereto for details of work performed.

Previous to the transfer of the supervision of tuberculosis to the State Board of Agriculture, no authority had been given to the State Board of Health to compel the destruction of tuberculosis animals,

and when such animals were found, advice was given by the Secretary as to the best disposition which should be made of them, and in the case of cows giving milk which was sold, the Secretary had authority as Commissioner of Public Health, to order the discontinuance of such sale, and also the sale of any part of the flesh of a tuberculous animal for food.

During the first six months of the year, the Secretary had advised the destruction of several tuberculous animals, and several milch cows had been, by advice, dried off from giving milk and held (including the entire herds) for confirmation of the suspicion of their having the disease.

No cases of anthrax known to the Secretary occurred during the year. Three small herds of swine were seen which were reported as suspected of having hog-cholera or swine-plague, but an investigation made it quite evident that in all the cases, the inflammation of the alimentary passages was caused by the products of the decomposition of animal substances in the food.

As a measure of safety against the introduction of tuberculosis and other diseases of domestic animals from Canada, Secretary Rusk of the Agricultural Department of the National Government has issued an order closing all the ports except St. Albans in the collection district of Vermont against the importation of cattle, sheep, and other ruminants and swine, and requiring that all such animals imported through this collection district must enter at the port of St. Albans, where they must be inspected by a veterinary inspector of the Department of Agriculture. Railroad companies carrying animals imported into the United States are required to provide the necessary pens and to unload such animals so that they may be properly inspected. The Secretary says this is done as a protection against the introduction into this country from Canada of any contagious disease affecting these classes of animals. Such inspection is provided for by the act of Aug. 30, 1890; and in view of the fact that the English veterinary authorities at Dundee, Scotland, have only recently seized Canadian cattle when landed there, declaring them to be affected with contagious pleuro-pneumonia, Secretary Rusk feels it incumbent upon him to take all measures necessary for its rigid enforcement. Moreover, England has prohibited the importation into that country of sheep from the United States on the ground that our government has not heretofore caused to be made an inspection or quarantine of sheep arriving here from other parts of the world.

REGISTRATION REPORT.

1891.

The value of reliable reports relating to the records of births, marriages and deaths and the items of fact connected therewith, has been so frequently presented in the previous reports of this Board as to need no repetition at this time. It is gratifying, however, to be able to state that, with no exception, persons eminent in social and political science everywhere, recognize the indispensable information such reports furnish, and that in every civilized country they occupy places of importance in the government reports scarcely second to any other department.

The Thirty-eighth Report on the registry of vital movements in Rhode Island was completed and issued by the end of the year, and will be found appended to this report.

The work of collecting the data for the Thirty-ninth Report, the enumerating, classifying, arranging and collating in tables for the purpose of presenting the various facts in such detail as to facilitate examination and study, has been in progress during the time of making up this report, and affords some facts which may be presented at this time.

Below will be found some of the general results of the registry of births, marriages and deaths during 1891.

BIRTHS.

SEX.		PARENT NATIVITY.	
Males.....	4,926	Native*.....	4,214
Females.....	4,500	Foreign.....	5,212
Whole number of births.....		9,426	

MARRIAGES.

Native born Groom and Bride.....	1,551
Foreign born Groom and Bride.....	1,079
Native Groom and Foreign Bride.....	346
Foreign Groom and Native Bride.....	344
Whole number of marriages.....	3,320
Native Grooms.....	1,897
Foreign Grooms.....	1,423

* Including all whose fathers were born in the United States, whether the fathers were of foreign parentage or of native.

DEATHS.

SEX.		PARENTAGE.	
Males.....	3,341	Native.....	2,928
Females.....	3,279	Foreign†.....	3,692
Whole number of deaths.....		6,620	

There was one birth to every 37.7 of the population, or.....26 5 births in every 1,000
 One person married in every 53.5 of the population, or.....18.7 persons married in every 1,000
 And one death in every 53.7 of the population, or..... 18.6 deaths in every 1,000

The following summary will show the rates, per 1,000 of the population, of births, marriages and deaths, for ten years.

	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Birth-rates	21.7	24.4	23.9	23.1	24.5	24.2	24.2	24.1	24.7	26.5
Death-rates.....	18.3	18.1	17.1	17.7	18.8	19.9	20.4	19.0	20.1	18.6
Excess of Birth-rates over Death-rates....	6.4	6.3	6.8	5.4	5.7	4.2	3.8	5.1	4.6	7.9
Marriage-rates ...	19.1	18.5	17.2	16.3	17.7	18.0	18.7	18.4	18.5	18.7

The following will present the number, parentage, and proportion to total mortality, of deaths from several diseases during 1891, which are recognized as having more or less prominence from year to year, as causes of death:

	Whole No.	Parentage.		Per centum of whole No.
	of Deaths.	Native.	Foreign.	
Cholera Infantum.....	546	170	376	8.25
Diarrhœa	84	27	57	1.26
Diphtheria.....	102	48	54	1.54
Dysentery.....	59	24	35	.89
Fever, Malarial.....	31	11	20	.48
Fever, Typhoid	149	56	93	2.26
Influenza (La Grippe)	177	91	86	2.68
Measles.....	12	4	8	.18
Whooping Cough.....	77	37	40	1.16
Scarlatina.....	33	12	21	.15
Pneumonia	568	247	321	8.58
Consumption.....	710	248	462	11.18
Apoplexy and Paralysis	335	207	128	5.08
Heart Disease.....	480	244	236	7.25
Bronchitis	247	95	152	3.74
Kidney Diseases.....	245	122	123	3.71
Cancer.....	177	104	73	2.96

† Including all whose fathers were foreign born.

	1891.	1890.	1889.
Average age in years of Male decedents	32.70	31.04	32.20
Female "	36.28	34.26	35.75
Total "	34.47	32.62	34.00
Percentage of Zymotic diseases to whole number of causes of death...	23.11	25.38	22.08
Constitutional diseases..	17.73	18.48	18.61
Local "	42.31	40.15	42.10
Developmental, " ..	11.77	10.89	12.04
Violence, etc.	5.08	5.10	5.17

Compared with the previous year the mortality from the diseases of children was rather less during 1891, which will account for the smaller percentage of deaths from zymotic diseases, and the increased average age of the total decedents.

APPENDIX.

PUBLIC STATUTES.

CHAPTER 83.

OF THE STATE BOARD OF HEALTH.

SECTION 1. The governor with the advice and consent of the senate shall appoint six persons, two from the county of Providence and one from each of the other counties, who shall constitute the state board of health, one of whom shall be appointed in each year for the term of six years from the first day of July. Any appointment to fill a vacancy shall be for the remainder of the term. Of the persons so appointed, at least three shall be well educated physicians and members of some medical society incorporated by the state. The governor may remove any member for cause, at any time, upon the written request of two-thirds of the board.

SEC. 2. The board shall take cognizance of the interests of life and health among the citizens of the state; they shall make investigation into the causes of disease, and especially of epidemics and endemics among the people, the sources of mortality, and the effects of localities, employments, conditions and circumstances on the public health, and shall do all in their power to ascertain the causes and the best means for the prevention of diseases of every kind in the state. They shall publish and circulate, from time to time, such information as they may deem to be important and useful for diffusion among the people of the state, and shall investigate and give advice in relation to such subjects relating to the public health, as may be referred to them by the general assembly or by the governor when the general assembly is not in session.

SEC. 3. The state board of health shall also investigate the subject of diseases among cattle or other animals.

SEC. 4. The board shall meet in the city of Providence once in three months, and as much oftener as they may deem necessary. No member of the board, except the secretary shall receive any compensation for his services; but the actual personal expenses of any member, while engaged in the duties of the board, shall be paid by the state.

SEC. 5. The board shall elect a well qualified physician as their secretary, who shall be *ex officio* a member of the board, the commissioner of public health and state registrar, but he shall not be permitted to vote on any question in which he is personally interested or be entitled to any additional compensation for mileage or expenses.

SEC. 6. The secretary of the board shall make inquiry from time to time, of the clerks of town and local boards of health and practising physicians in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease or causes of general ill-health, and also in relation to the proceedings of the said boards of health, in respect of acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals in their several towns; and the said clerks of town and local boards of health and said practising physicians shall give information, in reply to said inquiries, of such facts and circumstances as shall have come to their knowledge.

SEC. 7. The secretary shall perform and superintend the work prescribed for said board by law and such other duties as the board may require; he shall prepare and publish in every calendar month a general summary of all the deaths and causes of the same which had occurred in the state during the preceding month, the same to be made up from returns of deaths which shall be sent to him on or before the tenth day of the month following the date of such deaths, by the several town and city clerks and the city registrar of Providence city; he shall also prepare and publish for general distribution a monthly circular giving information and advice in regard to the preservation of health, suitable for each particular season, and giving also such information as he shall deem of advantage to the public, as to the prevalence and character of infectious diseases of domestic animals, and for such service he shall receive the sum of seventeen hundred dollars annually, or such proportion thereof as the said board may determine. He shall hold his office during the pleasure of the board and may be removed at any regular meeting by a majority vote of the members of said board.

SEC. 8. The governor shall provide a suitable office for the board in the city of Providence, and the actual expenses of the board and of the members thereof, when certified by the chairman and approved by the governor shall be paid from the state treasury.

SEC. 9. The board shall make a report in print to the general assembly, annually, of its proceedings during the year ending on the thirty-first day of December next preceding, with such suggestions in relation to the sanitary laws and interests of the state as they shall deem important.

ADDITIONS TO THE LIBRARY.

1891.

BOOK EXCHANGES.

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- “ Album of Agricultural Statistics, 1889.
- “ Census Bulletins.
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- “ Sixth Annual Report of the Commissioner of Labor, 1890.
- “ Report on Ilex Cassine or Aboriginal North American Tea.
- “ Contributions from the U. S. National Herbarium, Vol. L, Nos. i-iv.
- “ Verhandlungen des Internationalen Medicinischen Congresses, Berlin, Germany.
- “ Proceedings of National Conference of State Boards of Health, Washington, D. C., 1891.
- Massachusetts. Annual Report of the Statistics of Labor, 1890.
- “ Annual Report of the Statistics of Manufactures, 1890.

- Massachusetts. Nineteenth Annual Report of the Board of Health of Boston, 1890.
- “ Annual Report Massachusetts Commissioners on Contagious Diseases of Domestic Animals.
- “ Bulletins of Hatch Experiment Station.
- “ State Board of Health Reports, 1890. I. Purification of Sewage and Water. II. Examination of Water Supplies.
- “ Reports of Agricultural College.
- “ Reports of Department of Inspection of Milk and Vinegar, Boston, 1890.
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 “ Quarterly Report of Board of Public Works, Providence, 1890.
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 “ Report of Rhode Island Historical Society, 1890.
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REPORTS OF SUPERINTENDENTS, AND BOARDS OF HEALTH ; VITAL STATISTICS OF CITIES, ETC.

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THIRTY-EIGHTH REPORT

RELATING TO THE

REGISTRY AND RETURN

OF

Births, Marriages and Deaths,

AND OF DIVORCE,

IN THE

STATE OF RHODE ISLAND

FOR THE

YEAR ENDING DECEMBER 31, 1890.

PREPARED BY

CHARLES H. FISHER, M. D.,

STATE REGISTRAR OF VITAL STATISTICS; SECRETARY OF THE STATE BOARD OF HEALTH;
COMMISSIONER OF PUBLIC HEALTH.

PROVIDENCE:

E. L. FREEMAN & SON, STATE PRINTERS.

1891.

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CHARLES H. FISHER, *Secretary*.

State of Rhode Island and Providence Plantations.

OFFICE OF THE STATE REGISTRAR OF VITAL STATISTICS.

PROVIDENCE, October 12, 1891.

To the Honorable the General Assembly :

The Thirty-Eighth Annual Report upon the Registration of Births, Marriages, and Deaths in Rhode Island, and including judicial procedures in relation to divorce, during the year 1890, with compendiary Tables of the results of registration in previous years, is herewith respectfully submitted.

The plan of preceding years, in regard to the general arrangement of the Tables, summaries and comments, has been followed in this report, with some additional Tables, and a few special changes made to meet certain requirements.

In the special Tables the object has been to present the important facts of many years of registration, as well as of single years, in such manner as to make them readily apparent, and relieve the reader of the statistics of much of the labor of personal examination of each of the general Tables of the preceding reports, for the purpose of ascertaining the relation the various facts bear to each other.

The reports upon the records of the vital movements of the population of Rhode Island have acquired a reputation not confined to our own country, as statisticians in several countries in Europe, as well as in America, have been annual solicitors for copies for governmental, corporate and private use. It is the aim of the State Registrar to make them as perfect as possible, and, therefore, entirely trustworthy.

With great respect,

CHAS. H. FISHER,

State Registrar.



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REPORT UPON THE REGISTRATION
OF
BIRTHS, MARRIAGES AND DEATHS
IN
RHODE ISLAND,
FOR THE
YEAR ENDING DEC. 31, 1890.
AND
FOR VARIOUS PERIODS FROM 1853 TO 1890 INCLUSIVE.

TABLE I.

General Summary of Births and Marriages in the State of Rhode Island during the year 1890.

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS, 1890.							MARRIAGES, 1890.				
	Whole Number.	SEX.		PARENTAGE.				Whole Number.	NATIVITY.			
		Males.	Females.	Native.	Foreign.	Native Father. For. Mother.	For. Father. Native Mo.		American.	Foreign.	Native Groom. Foreign Bride.	For. Groom. Native Bride.
Barrington.....	32	19	13	13	14	1	4	16	9	2	4	1
Bristol.....	89	45	44	42	35	5	7	51	28	16	3	4
Warren.....	105	47	58	25	55	16	9	42	13	20	8	1
BRISTOL COUNTY.....	226	111	115	80	104	22	20	109	50	38	15	6
Coventry.....	104	60	44	41	48	7	8	32	29	1	1	1
East Greenwich.....	71	35	36	42	23	4	2	41	27	6	4	4
West Greenwich.....	20	12	8	19	1	1	1	157	57	57	29	14
Warwick.....	444	232	212	112	275	30	27	157	57	57	29	14
KENT COUNTY.....	639	339	300	211	346	42	37	230	113	64	34	19
Jamestown.....	3	3	3	3	1	1	1	1	1	1	1	1
Little Compton.....	5	1	4	4	1	1	1	9	8	1	1	1
Middletown.....	29	18	11	23	3	2	1	3	3	1	1	1
NEWPORT CITY.....	665	345	320	251	292	69	53	180	95	52	18	15
New Shoreham.....	28	12	16	23	3	2	1	12	9	3	3	1
Portsmouth.....	20	11	9	17	1	1	1	9	9	1	1	1
Tiverton.....	68	35	33	31	27	8	2	18	15	3	3	1
NEWPORT COUNTY.....	818	422	396	352	324	83	59	232	140	52	25	15
Burrillville.....	86	45	41	26	38	8	14	34	13	15	3	3
Cranston.....	152	75	77	68	62	13	9	61	35	13	5	8
Cumberland.....	198	97	101	38	122	20	18	81	26	34	7	14
East Providence.....	168	78	90	101	44	9	14	66	50	9	3	4
Foster.....	16	9	7	16	1	1	1	8	8	1	1	1
Glocester.....	44	19	25	23	13	6	2	8	6	1	1	1
Johnston.....	245	141	104	84	114	24	23	59	32	18	3	6
Lincoln.....	657	352	305	97	452	79	29	145	34	67	15	29
North Providence.....	46	20	26	16	26	4	4	4	2	2	1	1
North Smithfield.....	65	29	36	17	36	4	8	22	6	8	3	5
PAWTUCKET.....	697	361	336	211	296	72	88	262	117	82	31	32
PROVIDENCE CITY.....	3,416	1,693	1,723	1,209	1,613	318	276	1,108	663	459	150	161
Scituate.....	81	45	36	57	14	7	3	44	35	2	7	1
Smithfield.....	45	23	22	16	21	6	2	8	5	1	1	2
WOONSOCKET.....	570	301	266	109	319	47	65	201	68	81	26	26
PROVIDENCE COUNTY.....	6,486	3,291	3,195	3,118	2,200	613	555	2,411	1,093	781	250	287
Charlestown.....	11	4	7	8	1	1	2	5	4	1	1	1
Exeter.....	14	4	10	13	1	1	1	12	11	1	1	1
Hopkinton.....	53	30	23	46	3	3	1	27	24	1	2	1
Narragansett.....	22	10	12	15	3	4	1	4	3	1	1	1
North Kingstown.....	61	29	32	39	10	6	6	31	23	1	5	2
South Kingstown.....	79	41	38	66	1	5	7	57	50	2	1	4
Richmond.....	35	18	17	23	5	4	3	8	5	3	3	1
Westerly.....	106	52	54	47	46	7	6	69	39	13	7	10
WASHINGTON COUNTY.....	381	188	193	257	70	29	25	213	159	16	21	17

TABLE I.—Continued.

General Summary of Deaths in the State of Rhode Island, during the year 1890.

DEATHS, 1890.												
Whole Number.	SEX.		PARENTAGE.		Ages Given.		Aggregate Age in Years.		Average Age in Years.		Aggregate Age in Years of all.	Average Age of Years of all.
	Males.	Females.	Native.	Foreign.	Males.	Females.	Males.	Females.	Males.	Females.		
25	14	11	16	9	14	11	750	611	53.59	55.55	1,361	54.44
115	48	67	75	40	48	67	2,308	2,836	46.00	42.33	5,041	43.86
113	58	55	53	60	58	55	2,315	1,949	39.91	35.43	4,264	37.73
253	120	133	144	109	120	133	5,273	5,396	43.94	40.55	10,669	42.17
88	43	45	70	18	43	45	1,819	1,415	42.30	31.44	3,234	36.75
67	33	34	53	14	33	34	1,254	1,598	38.00	47.00	2,852	42.57
16	11	5	16	.....	11	5	495	349	45.00	69.80	841	52.75
299	168	131	138	161	168	131	4,188	3,506	24.63	26.76	7,644	25.57
470	255	215	277	193	255	215	7,706	6,868	30.22	31.94	14,574	31.01
4	2	2	4	.....	2	2	155	96	77.50	48.00	251	62.75
22	8	14	21	1	8	14	429	660	53.63	47.14	1,089	49.50
9	5	4	7	2	5	4	192	237	38.40	59.25	429	47.64
348	175	173	160	188	175	173	5,734	7,774	32.65	44.96	13,508	38.79
19	9	10	19	.....	9	10	452	392	50.22	39.20	844	44.44
21	10	11	19	2	10	11	510	675	51.00	61.36	1,185	56.43
49	27	22	23	26	27	22	700	718	25.93	32.64	1,418	28.94
472	236	236	253	219	236	236	8,172	10,552	34.64	44.71	18,724	39.66
106	53	53	45	61	53	53	1,966	1,797	37.09	33.91	3,763	35.50
120	52	68	64	56	52	68	1,405	2,467	27.02	36.28	3,872	32.27
159	78	81	45	114	77	81	1,971	2,490	25.59	30.74	4,461	28.23
131	70	61	88	43	69	61	2,826	2,058	41.83	33.74	4,884	37.57
17	12	5	17	.....	12	5	674	261	56.17	32.50	935	55.00
46	27	19	30	16	27	19	1,161	909	43.11	47.84	2,073	45.07
156	85	71	63	93	85	71	1,390	1,919	23.41	26.90	3,309	25.06
402	222	210	64	398	221	239	3,968	6,115	17.95	25.56	10,083	21.09
43	19	24	17	26	19	24	601	594	31.63	24.75	1,195	28.02
29	16	13	9	20	16	13	409	520	25.56	40.00	929	32.03
606	312	294	225	381	312	292	9,412	9,722	30.17	33.29	19,134	31.68
2,876	1,431	1,442	1,193	1,683	1,434	1,442	43,435	48,205	30.22	33.43	91,640	31.86
48	23	25	35	15	23	25	835	945	36.30	37.80	1,780	37.08
45	20	25	29	16	20	25	718	1,019	35.90	41.91	1,767	39.27
428	218	210	101	327	218	210	4,752	5,574	21.80	26.52	10,326	24.13
5,272	2,641	2,631	2,025	3,247	2,638	2,628	76,126	84,625	28.86	32.20	160,751	30.53
11	4	7	11	.....	4	7	215	418	53.73	59.71	633	57.57
13	7	6	13	.....	7	6	351	319	50.14	53.17	670	51.51
36	10	26	32	4	10	26	686	1,306	68.60	50.23	1,992	55.33
17	13	4	14	3	12	4	297	176	24.75	14.00	473	29.56
51	26	25	49	2	26	25	958	1,281	37.62	51.21	2,239	43.90
60	32	28	53	7	32	28	1,736	1,472	51.25	52.57	3,208	53.35
31	18	13	29	2	18	13	1,044	701	58.00	53.92	1,745	56.29
99	49	50	51	48	49	50	1,639	1,561	33.45	31.22	3,200	32.32
318	159	159	252	66	158	159	6,926	7,294	43.84	45.50	14,160	44.67

TABLE I.—Continued.

General Summary of Births and Marriages in the State of Rhode Island, by Counties, during the year 1890.

DIVISIONS OF THE STATE.	BIRTHS, 1890.							MARRIAGES, 1890.				
	Whole Number.	SEX.		PARENTAGE.				Whole Number.	NATIVITY.			
		Males.	Females.	Native.	Foreign.	Native Father. Foreign Mother.	Foreign Father. Native Mother.		Native.	Foreign.	Native Groom. Foreign Bride.	Foreign Groom. Native Bride.
BRISTOL COUNTY.....	226	111	115	80	104	22	20	109	50	38	15	6
KENT COUNTY.....	639	339	300	214	346	42	37	230	113	64	34	19
NEWPORT COUNTY...	818	422	396	352	324	83	59	232	140	52	25	15
PROVIDENCE CO.....	6,486	3,291	3,195	3,118	2,200	613	555	2,411	1,093	781	250	287
WASHINGTON CO.....	381	188	193	257	70	29	25	213	159	16	21	17
STATE INSTITUTIONS												
WHOLE STATE.....	8,550	4,351	4,199	4,021	3,041	789	696	3,195	1,555	951	345	341

TABLE I.—Continued.

General Summary of Deaths in the State of Rhode Island, by Counties, during the year 1890.

DEATHS, 1890.												
Whole Number.	SEX		PARENTAGE.		Ages Given.		Aggregate Age in Years.		Average Age in Years.		Aggregate Age in Years of all.	Average Age in Years of all.
	Males.	Females.	Native.	Foreign. *	Males.	Females.	Males.	Females.	Males.	Females.		
253	120	133	144	109	120	133	5,273	5,396	43.94	40.55	10,669	42.17
470	255	215	277	193	255	215	7,706	6,868	30.22	31.94	14,574	31.01
472	236	236	253	219	236	236	8,172	10,552	34.04	44.71	18,724	39.66
5,272	2,641	2,631	2,025	3,247	2,638	2,628	76,126	84,625	28.86	32.20	160,751	30.53
318	159	159	252	66	158	159	6,926	7,234	43.84	45.50	14,160	44.67
140	90	50	59	90	89	58	4,298	2,803	48.20	48.32	7,101	48.31
6,934	3,501	3,433	3,010	3,924	3,496	3,429	108,501	117,478	31.04	34.26	225,979	32.62

* Including children of foreign born parents.

TABLE II.—BIRTHS, 1890.

Arranged by Months, Sexes and Divisions of the State.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.								
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Providence City.	Pawtucket.	Woonsocket.	Washington County.
January....	Males....	371	11	20	8	43	64	148	31	32	14
	Females..	319	9	24	8	28	53	134	34	16	13
	Total....	690	20	44	16	71	117	282	65	48	27
February...	Males....	297	6	25	3	14	65	120	25	18	21
	Females..	297	9	16	3	27	53	130	26	18	15
	Total....	594	15	41	6	41	118	250	51	36	36
March	Males....	348	7	39	7	27	58	140	27	28	15
	Females..	319	11	25	7	19	67	134	21	18	17
	Total....	667	18	64	14	46	125	274	48	46	32
April	Males....	377	10	29	10	27	83	144	24	28	22
	Females..	320	7	23	9	24	56	136	22	27	16
	Total....	697	17	52	19	51	139	280	46	55	38
May	Males....	349	8	30	6	23	80	134	27	24	17
	Females..	340	8	31	2	22	57	161	20	24	15
	Total....	689	16	61	8	45	137	295	47	48	32
June... ..	Males....	349	6	19	4	32	88	136	24	24	16
	Females..	348	4	17	7	25	89	142	25	28	11
	Total....	697	10	36	11	57	177	278	49	52	27
July	Males....	358	12	33	5	24	78	148	32	19	7
	Females..	374	16	38	10	16	81	148	29	16	20
	Total....	732	28	71	15	40	159	296	61	35	27

TABLE II.—BIRTHS, 1890.—Continued.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.								
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Providence City.	Pawtucket.	Woonsocket.	Washington County.
August.	Males. . . .	396	10	18	10	32	72	162	37	37	18
	Females . .	397	11	25	10	24	74	178	36	23	16
	Total. . . .	793	21	43	20	56	146	340	73	60	34
September. .	Males. . . .	343	12	27	3	26	82	133	35	15	10
	Females . .	356	9	13	4	45	72	133	30	28	22
	Total. . . .	699	21	40	7	71	154	266	65	43	32
October	Males. . . .	355	9	31	7	32	70	142	24	22	18
	Females . .	346	9	22	6	20	70	145	34	27	13
	Total. . . .	701	18	53	13	52	140	287	58	49	31
November ..	Males. . . .	365	8	27	6	31	90	129	36	25	13
	Females . .	397	15	35	5	34	95	154	23	14	22
	Total. . . .	762	23	62	11	65	185	283	59	39	35
December ..	Males. . . .	443	12	41	8	34	103	157	39	32	17
	Females . .	386	7	31	5	36	103	128	36	27	13
	Total. . . .	829	19	72	13	70	206	285	75	59	30
Whole Year.	Males. . . .	4,351	111	339	77	345	933	1,693	361	304	188
	Females . .	4,199	115	300	76	320	870	1,723	336	266	193
	Total. . . .	8,550	226	639	153	665	1,803	3,416	697	570	381

TABLE III.—PLURALITY BIRTHS, 1890.

ARRANGED BY MONTHS, SEXES, AND DIVISIONS OF THE STATE; AND SHOWING THE NATIVITY OF THE PARENTS.

MONTHS.		SEX.	Number of Children.	DIVISIONS OF THE STATE.							NATIVITY OF THE PARENTS.																						
	Number of Cases.			Bristol County.	Kent County.	Newport County*	Newport City.	Providence Co.*	Providence City.	Washington Co.	American.	Irish.	English.	Canadian.	French.	Italian.	Scotch.	Portuguese.	Swedish.	Russian.	German.	American Father.	Irish Mother.	English Father.	Amer. Mother.	French Father.	German Mother.	Irish Father.	Amer. Mother.	English Father.	Irish Mother.	Swedish Father.	Amer. Mother.
January	5	{ Males.....6 Females.....5	11	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
February	8	{ Males.....13 Females.....3	16	1	1	4	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1
March	9	{ Males.....8 Females.....10	18	1	1	2	4	1	3	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
April	10	{ Males.....7 Females.....13	20	1	1	3	5	1	4	1	2	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
May	6	{ Males.....6 Females.....6	12	1	1	1	6	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
June	6	{ Males.....6 Females.....6	12	1	1	3	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
July	8	{ Males.....8 Females.....8	16	1	1	2	5	1	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
August	10	{ Males.....15 Females.....5	20	1	1	2	7	1	5	1	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
September	12	{ Males.....15 Females.....9	24	2	2	2	6	1	5	4	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
October	11	{ Males.....9 Females.....13	22	1	1	2	8	1	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
November	7	{ Males.....5 Females.....9	14	2	3	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
December	7	{ Males.....5 Females.....5	14	1	2	2	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Whole Year	99	{ Males.....107 Females.....92	199	16	47	18	51	2	38	14	6	12	1	3	1	5	1	1	1	1	1	4	2	1	3	1	4	1	3	4	1	1	1

* Not including the cities of Providence and Newport.

One case of triplets, in Tiverton, in January.

TABLE IV.—MARRIAGES, 1890.

Arranged by Months and Divisions of the State.

MONTHS.	Whole State, 1890.	DIVISIONS OF THE STATE.										Whole State, 1889.
		Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket.	Providence City.	Woonsocket.	Washington County.		
January.....	271	10	20	5	13	46	16	115	22	24	261	
February..	243	11	11	2	11	51	18	106	20	13	220	
March	135	1	13	4	5	24	9	59	9	11	194	
First Quarter...	649	22	44	11	29	121	43	280	51	48	675	
April.....	325	11	16	5	18	48	24	156	23	24	243	
May.....	246	6	27	4	10	41	19	105	16	18	230	
June.....	305	11	23	1	17	45	30	150	15	13	290	
Second Quarter.	876	28	66	10	46	134	73	411	54	55	763	
July.....	209	10	13	6	10	43	24	73	14	16	203	
August.....	228	4	20	2	11	45	25	101	10	10	240	
September	319	15	24	5	24	50	31	127	23	20	271	
Third Quarter..	756	29	57	13	45	138	80	301	47	46	714	
October.....	338	9	13	8	23	50	27	165	19	24	331	
November.....	363	13	30	9	27	65	23	152	19	25	345	
December	213	8	21	1	10	32	16	99	11	15	201	
Fourth Quarter.	914	30	64	18	60	137	66	416	49	64	877	
Whole Year....	3,195	109	230	52	180	540	262	1,408	201	213	3,029	

TABLE V.—DEATHS, 1890.

Arranged by Months, Sexes and Divisions of the State.

MONTHS.	SEX.		DIVISIONS OF THE STATE.									
			Whole State.	Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket.	Providence City.	Woonsocket.	Washington County.	State Institutions.
January...	Males..	428	15	25	6	19	75	50	184	28	16	10
	Females	453	11	30	5	14	101	43	200	22	19	8
	Total ..	881	26	55	11	33	176	93	384	50	35	18
February ..	Males..	292	10	29	6	13	51	28	113	17	15	10
	Females	273	12	19	6	14	51	28	115	12	13	3
	Total ..	565	22	48	12	27	102	56	228	29	28	13
March	Males..	297	6	22	3	16	59	33	123	15	10	10
	Females	284	10	23	3	10	52	24	127	11	20	4
	Total ..	581	16	45	6	26	111	57	250	26	30	14
April.....	Males..	276	9	18	2	9	54	25	114	17	15	13
	Females	270	9	22	9	19	46	22	108	11	13	11
	Total ..	546	18	40	11	28	100	47	222	28	28	24
May.....	Males..	272	10	18	7	12	50	10	130	8	18	9
	Females	247	9	13	4	11	48	20	108	18	11	5
	Total ..	519	19	31	11	23	98	30	238	26	29	14
June.....	Males..	225	7	13	8	8	52	21	88	14	10	4
	Females	227	16	14	3	15	47	23	88	15	5	1
	Total ..	452	23	27	11	23	99	44	176	29	15	5
July	Males..	366	11	31	7	21	72	28	139	33	13	11
	Females	325	17	19	6	11	62	23	132	31	20	4
	Total ..	691	28	50	13	32	134	51	271	64	33	15

TABLE V.—DEATHS, 1890.—Continued.

MONTHS.	SEX.	DIVISIONS OF THE STATE.										
		Whole State.	Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket.	Providence City.	Woonsocket.	Washington County.	State Institutions.
August....	Males..	353	7	29	5	28	65	24	145	33	15	2
	Females	362	15	24	11	20	79	31	137	23	14	8
	Total ..	715	22	53	16	48	144	55	282	56	29	10
September.	Males..	261	10	24	5	17	57	21	91	12	20	4
	Females	285	8	19	6	25	62	25	110	17	10	3
	Total ..	546	18	43	11	42	119	46	201	29	30	7
October ...	Males..	265	12	21	4	15	57	34	98	14	8	2
	Females	251	12	10	3	12	59	20	108	17	9	1
	Total ..	516	24	31	7	27	116	54	206	31	17	3
November.	Males..	230	15	12	6	8	45	20	91	12	11	10
	Females	206	11	12	4	13	34	20	84	15	7	6
	Total ..	436	26	24	10	21	79	40	175	27	18	16
December..	Males..	236	8	13	2	9	40	18	118	15	8	5
	Females	250	3	10	3	9	44	15	125	18	18	5
	Total ..	486	11	23	5	18	84	33	243	33	26	10
Whole Year	Males..	3,501	120	255	61	175	677	312	1,434	218	159	90
	Females	3,433	133	215	63	173	685	294	1,442	210	159	59
	Total ..	6,934	253	470	124	348	1,362	606	2,876	428	318	149

TABLE VI.—DEATHS, 1890.

Exhibiting the Whole Number, the Proportion to Population, the Number of each Sex, and the Number in each Period of Life, in every Town and Division of the State.

TOWNS AND DIVISIONS OF THE STATE.	Population, 1890.	DEATHS.				Under 1 year.	1 to 2.
		Total.	Per 1000 of population.	SEX.	Number of each Sex.		
Barrington	1,461	25	17.1	Males.....	14	2	...
				Females...	11	1	....
Bristol	5,478	115	20.9	Males.....	48	6	...
				Females...	67	10	5
Warren.....	4,489	113	25.2	Males.....	58	11	1
				Females...	55	10	4
BRISTOL COUNTY..	11,428	253	22.1	Males.....	120	19	1
				Females...	133	21	9
Coventry.....	5,068	88	17.4	Males.....	43	11	1
				Females...	45	9	1
East Greenwich...	3,127	67	21.4	Males.....	33	10	4
				Females...	34	6	2
West Greenwich ..	798	16	20.0	Males.....	11	2	....
				Females...	5	....	....
Warwick.....	17,761	299	16.9	Males.....	168	51	17
				Females...	131	31	6
KENT COUNTY....	26,754	470	17.6	Males.....	255	74	22
				Females...	215	46	9
Jamestown	707	4	5.7	Males.....	2	....	....
				Females...	2	....	....
Little Compton...	1,128	22	19.5	Males.....	8	....	....
				Females...	14	1	1
Middletown	1,154	9	7.8	Males.....	5	1	....
				Females...	4	....	....
NEWPORT CITY ...	19,457	348	17.9	Males.....	175	44	5
				Females...	173	18	7
New Shoreham ...	1,320	19	14.4	Males.....	9	2	....
				Females...	10	2	....
Portsmouth	1,949	21	10.8	Males.....	10	1	....
				Females...	11	2	....
Tiverton	2,837	49	17.2	Males.....	27	7	1
				Females...	22	8	....
NEWPORT COUNTY.	28,552	472	16.5	Males.....	236	55	6
				Females...	236	31	8
Burrillville	5,492	106	19.1	Males.....	53	12	2
				Females...	53	10	1
Cranston.....	6,399	120	18.8	Males.....	52	13	4
				Females...	68	7	5
Cumberland	8,090	159	19.6	Males.....	78	18	4
				Females...	81	13	6

TABLE VI.—DEATHS, 1890.—Continued.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
...	...	...	...	...	1	1	2	...	3	4	...	1	...
1	...	...	...	1	...	...	...	1	1	4	1	1	...
1	...	2	...	1	3	7	4	3	6	11	4	...	...
2	3	1	...	2	5	2	3	7	9	8	8	2	...
...	3	3	3	2	2	2	5	3	8	9	6	...	...
3	...	1	1	1	8	5	3	5	3	5	4	2	...
1	3	5	3	3	6	10	11	6	17	24	10	1	...
6	3	2	1	4	13	7	6	13	13	17	13	5	...
1	...	2	...	...	3	...	4	1	5	12	3	...	...
2	4	4	...	1	5	4	...	2	3	6	3	1	...
1	...	...	...	...	1	...	2	2	...	9	4	...	...
...	...	2	1	...	2	1	1	1	5	4	7	2	...
...	2	...	...	...	...	...	...	1	1	5	...	...	...
...	...	...	...	...	...	...	1	...	2	1	...	1	...
2	5	6	5	4	6	6	8	12	20	17	8	1	...
6	6	6	2	2	11	14	6	9	8	13	9	2	...
4	7	8	5	4	10	5	14	16	26	43	15	1	...
8	10	12	3	3	18	19	8	12	18	24	19	6	...
...	...	...	...	1	...	...	...	...	...	1	1	...	...
...	...	2	...	...	...	...	1	1	...	3	...	1	...
1	...	1	...	...	1	...	...	2	2	4	1	...	...
...	...	...	1	...	...	1	...	...	1	1	...	...	...
...	...	...	...	...	1	...	...	1	...	1	1	...	...
7	5	5	2	3	11	19	16	15	17	18	7	1	...
2	7	11	2	1	10	9	15	21	26	23	19	2	...
...	...	...	...	...	1	...	...	2	...	2	2	...	...
...	...	...	2	...	1	...	1	...	1	2	...	1	...
1	...	...	...	1	...	...	1	...	2	3	1	...	...
...	...	...	...	...	...	...	1	...	1	4	2	1	...
3	3	...	...	...	4	1	2	...	3	1	2	...	...
...	...	2	1	...	2	1	...	1	1	3	1	2	...
11	8	7	3	4	15	22	20	18	23	29	13	2	...
3	7	14	5	2	15	10	17	25	31	37	25	6	...
...	1	1	...	1	8	2	4	8	4	7	3	...	...
2	2	3	2	2	5	4	5	6	1	5	4	1	...
...	3	4	1	3	2	4	3	5	5	3	2	...	...
1	5	3	2	3	4	6	4	5	9	11	2	1	...
6	4	6	2	1	9	4	5	3	5	8	1	1	1
1	3	3	4	3	12	5	7	9	7	3	5	...	...

TABLE VI.—DEATHS, 1890.—Continued.

TOWNS AND DIVISIONS OF THE STATE.	Population, 1890.	DEATHS.				Under 1 year.	1 to 2.
		Total.	Per 1000 of population.	SEX.	Number of each Sex.		
East Providence...	8,422	131	15.6	Males.....	70	13	4
				Females...	61	15	3
Foster	1,252	17	13.6	Males.....	12	....	1
				Females...	5	....	....
Glocester	2,095	46	22.0	Males.....	27	5	1
				Females...	19	1	1
Johnston	9,778	156	16.0	Males.....	85	35	7
				Females...	71	25	7
Lincoln.....	20,355	462	22.2	Males.....	222	87	22
				Females...	240	60	23
North Providence.	2,084	43	20.6	Males.....	19	3	1
				Females...	24	9	2
North Smithfield..	3,173	29	9.1	Males.....	16	3	2
				Females...	13	3	1
PAWTUCKET.....	27,633	606	21.9	Males.....	312	83	15
				Females...	294	65	19
PROVIDENCE CITY.	132,146	2,876	21.7	Males.....	1,434	321	87
				Females...	1,442	315	75
Scituate	3,174	48	15.1	Males.....	23	7	1
				Females...	25	6	....
Smithfield	2,500	45	18.0	Males.....	20	2	1
				Females...	25	2	1
WOONSOCKET.....	20,830	428	20.5	Males.....	218	72	20
				Females...	210	64	17
PROVIDENCE Co ..	238,123	5,272	22.1	Males.....	2,641	674	172
				Females...	2,631	595	161
Charlestown.....	915	11	12.0	Males.....	4	....	....
				Females...	7	....	....
Exeter.....	964	13	13.5	Males.....	7	....	....
				Females...	6	1	....
Hopkinton	2,864	36	12.6	Males.....	10	....	....
				Females...	26	2	3
Narragansett	1,408	17	12.1	Males.....	13	3	....
				Females...	4	....	....
North Kingstown.	4,193	51	12.2	Males.....	26	6	1
				Females...	25	2	....
South Kingstown.	4,823	60	12.4	Males.....	32	3	2
				Females...	28	1	4
Richmond.....	1,669	31	18.6	Males.....	18	1	....
				Females...	13	....	1
Westerly.....	6,813	99	14.5	Males.....	49	12	4
				Females...	50	12	2
WASHINGTON Co..	23,649	318	13.5	Males.....	159	25	7
				Females...	159	18	10
State Institutions .	.....	149	87.6	Males.....	90	1	1
				Females...	59	5	2

TABLE VI.—DEATHS, 1890.—Continued.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
1	....	....	1	2	6	6	5	7	11	5	7	1	1
1	1	2	1	3	5	6	2	7	5	4	5	1	...
....	....	....	....	1	1	....	....	2	3	3	1	....	....
....	....	....	....	1	1	....	1	....	....	....	2	....	....
2	1	....	....	1	1	3	....	....	2	7	4	....	....
....	1	....	....	....	2	3	3	1	1	3	3	....	....
1	4	5	1	2	2	2	4	7	1	7	6	1	....
1	....	1	1	1	4	4	9	5	6	6	1	....	....
7	17	6	1	11	11	11	14	8	14	8	4	....	1
13	11	6	2	6	25	14	24	14	22	12	6	1	1
1	....	1	....	....	3	4	2	....	2	2	....	....	....
3	....	....	....	....	2	2	....	1	1	2	2	....	....
....	....	....	1	3	3	....	....	1	1	2	....	....	....
....	2	....	....	....	1	1	....	....	1	2	2	....	....
10	11	12	6	2	19	37	21	31	32	23	9	1	....
8	6	13	8	4	21	18	23	21	38	34	13	1	2
38	56	44	24	38	151	134	121	144	110	107	57	2	....
35	39	38	24	48	124	125	115	134	139	129	83	19	....
1	....	....	....	2	....	1	1	1	3	4	2	....	....
1	....	....	1	1	4	1	....	2	4	3	2	....	....
1	2	1	....	....	2	2	....	4	2	2	1	....	....
....	1	3	....	1	....	5	2	2	2	2	3	1	....
6	10	9	3	8	24	8	14	12	13	15	4	....	....
1	4	3	10	8	15	29	10	16	14	10	6	3	....
74	109	89	40	75	242	218	194	233	208	203	101	6	3
67	75	75	55	81	225	223	205	223	250	226	139	28	3
....	....	....	....	....	2	....	....	....	....	....	2	....	....
....	....	....	....	....	1	....	1	1	1	3	....	....	....
....	....	....	....	1	2	....	....	....	3	....	....	1	....
....	....	....	....	....	1	....	....	1	....	2	1	....	....
....	....	....	....	....	1	....	....	5	1	1	2	....	....
....	....	1	1	....	1	....	3	3	2	4	4	2	....
....	....	....	....	2	3	2	1	....	1	....	....	....	1
....	....	....	....	1	....	....	2	....	1	....	....	....	....
1	....	1	....	2	....	2	4	1	1	5	2	....	....
1	....	....	1	2	1	....	3	1	5	7	2	....	....
....	....	....	2	....	1	1	1	2	6	11	3	....	....
....	....	....	....	....	2	2	4	....	3	6	5	1	....
1	....	....	....	....	1	1	....	4	3	2	5	....	....
....	....	....	....	....	1	3	1	1	1	3	1	1	....
....	4	2	....	1	2	4	1	5	5	3	4	2	....
....	....	2	1	4	4	8	5	2	5	3	1	1	....
2	4	3	2	6	12	10	7	12	24	22	17	5	1
1	....	3	3	7	11	13	19	9	18	28	14	5	....
....	....	....	1	1	10	22	12	14	13	5	8	1	1
....	....	....	2	2	2	8	6	5	10	9	4	3	1

TABLE VI Continued.—DEATHS, 1890.—RECAPITULATION.

DIVISIONS OF THE STATE.	Population, 1890.	DEATHS.				Under 1 year.	1 to 2.
		Total.	Per 1000 of Pop- ulation.	SEX.	Number of each SEX.		
BRISTOL COUNTY..	11,428	253	22.1	Males.....	120	19	1
				Females...	133	21	9
KENT COUNTY....	26,754	470	17.6	Males.....	255	74	22
				Females...	215	46	9
NEWPORT COUNTY.	28,552	472	16.5	Males.....	236	55	6
				Females...	236	31	8
PROVIDENCE Co ..	238,123	5,272	22.1	Males.....	2,641	674	172
				Females...	2,631	595	161
WASHINGTON Co..	23,649	318	13.5	Males.....	159	25	7
				Females...	159	18	10
STATE INST'NS....	1,700	149	87.6	Males.....	96	1	1
				Females...	59	5	2
WHOLE STATE ...	345,506	6,934	20.7	Males.....	3,501	848	209
				Females...	3,433	716	199

TABLE VI Continued.—DEATHS, 1890.—RECAPITULATION.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
1	3	5	3	3	6	10	11	6	17	24	10	1	....
6	3	2	1	4	13	7	6	13	13	17	13	5	....
4	7	8	5	4	10	6	14	16	26	43	15	1	....
8	10	12	3	3	18	19	8	12	18	24	19	6	....
11	8	7	3	4	15	22	20	18	23	29	13	2	....
3	7	14	5	2	15	10	17	25	31	37	25	6	....
74	109	89	40	75	242	218	194	233	208	203	101	6	3
67	75	75	55	81	225	223	205	223	250	226	139	28	3
2	4	3	2	6	12	10	7	12	24	22	17	5	1
1	....	3	3	7	11	13	19	9	18	28	14	5	....
....	....	....	1	1	10	22	12	14	13	5	8	1	1
....	....	....	2	2	2	8	6	5	10	9	4	3	1
92	131	112	54	93	295	288	258	299	311	326	164	16	5
85	95	106	69	99	284	280	261	287	340	341	214	53	4

TABLE VII.—CAUSES OF DEATH, 1890.

Arranged Alphabetically; showing the Number of each Sex, who died from each cause, in each month and in the whole year 1890, also the Number of Native and of Foreign Paralytics, from each cause, for the year.

CAUSES OF DEATH.	Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.												PARENTAGE.		SEX.				
	M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		Nat.	For.	M.	F.	Total.
	—	—	—	—	—	—	—	—	—	—	—	—	—	—					
Accidents, Asphyxia.....	..	..	1	..	1	..	2	1	..	..	..	..	1	..	3	3	5	1	6
Burns and Scalds.....	1	..	3	1	..	2	2	1	..	3	1	..	1	2	8	12	13	7	20
Concussion of Brain.....	..	..	..	..	2	..	..	..	..	1	..	..	1	1	1	4	5	..	5
Drowning.....	2	2	1	..	5	3	5	23	7	3	3	2	6	..	31	40	62	9	71
Exposure.....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	1
Falls.....	2	4	2	1	2	1	2	1	4	3	1	..	1	2	11	21	22	10	32
Fractures and Contusions.	3	1	3	1	1	1	1	2	1	2	2	2	2	1	12	13	21	4	25
Flesh Wounds.....	..	1	..	..	..	..	..	..	..	..	..	..	2	..	1	2	3	..	3
Gunshot Wounds.....	..	..	..	1	1	..	..	..	..	..	..	1	1	..	4	..	4	..	4
Heat and Sunstroke.....	..	..	..	..	..	1	2	1	2	..	..	..	..	..	..	6	5	1	6
Injury at Birth.....	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	1	1	2
Kick of Horse.....	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	1	..	1
Lightning and Electricity.	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	1	..	1
Poisoning by Arsenic.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
by Chloroform.....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	1
by Coal Gas.....	..	1	..	..	..	..	..	..	1	..	1	..	..	..	1	1	2	..	2
by Opium and Morph.	1	..	1	..	..	..	..	..	1	..	1	..	..	..	3	..	2	1	3
by Paris Green.....	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	1	..	1
Otherwise.....	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	1	..	2
Railroad.....	2	1	2	2	3	1	1	1	..	1	5	6	3	2	9	22	29	2	31
Run Over.....	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	1	2	..	2

CAUSES OF DEATH.														PARENTAGE.				SEX.												
Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Nat.	For.	M.	F.	Total.		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.							
Inanition.....	1	1	2	..	1	..	1	1	1	2	2	2	1	1	1	2	2	2	3	..	1	..	4	..	16	15	26	11	31	
Indigestion.....	2	..	1	2	2	1	..	2	..	1	..	2	3	1	1	..	1	1	1	1	..	..	2	..	11	13	11	13	24
Influenza.....	47	61	12	15	4	7	3	5	1	3	1	1	2	..	..	..	..	..	1	2	1	..	1	..	68	100	72	96	168
Inanition.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	
Insanity.....	2	3	3	..	1	1	1	..	..	1	..	3	..	1	..	2	2	1	2	1	1	2	1	16	14	19	11	30	
Intussusception.....	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	2
Ischuria.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Jandice.....	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	1	3	4	
Kidney Disease.....	..	1	1	..	1	1	..	..	..	1	1	1	1	1	1	1	1	1	1	1	2	1	1	8	6	7	7	14	
Addison's.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1
Bright's Disease.....	6	9	3	4	8	7	5	6	7	7	10	2	10	5	1	6	9	7	6	5	6	8	5	11	73	80	76	77	153	
Laryngitis.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	1	2	3	..	3
Leucoethemia.....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	1	1	2
Liver Disease.....	..	2	1	..	..	..	1	1	1	1	1	1	1	1	2	..	1	..	2	2	1	1	1	8	8	10	6	16	
Amyloid Degeneration.....	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	2	1	2	3
Atrophy.....	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	3
Cirrhosis.....	4	1	..	1	1	1	2	1	2	1	..	5	1	2	..	1	1	1	2	1	1	2	1	11	17	20	8	28		
Hypertrophy.....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2	1	2	3
Inflammation.....	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	2	..	..	..	..	..	..	..	1	2	4	3	7
Rupture.....	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	1	..	..	..	..	..	..	..	..	1	1	1	1	2
Locomotor Ataxia.....	1	1	..	..	..	..	..	1	1	..	1	..	..	..	..	1	1	1	..	..	..	..	..	..	1	1	1	1	2
Lumbago.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	1	4
Lung Diseases.....	1	1	1	1	2	1	..	1	3	1	1	..	1	1
Oedema.....	1	..	..	..	..	1	..	1	..	1	..	1	1	..	1	1	1	..	..	..	1	..	..	..	2	5	5	2	7
Malformation of Anus.....	..	..	1	1	1	1	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4	..	4
Malformation of Heart.....	..	1	2	1	1	1	1	1	1	1	..	1	1	..	1	..	1	..	1	..	..	..	1	1	2	6	6	6	12

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Nat.	For.	M.	F.	Total.
Trismus Nascentium.....																									1	...	...	1	1
Tuberculosis.....	4	3	3	2	1	2	2	2	1	1	1	1	1	1	3	2	...	...	1	1	1	1	2	3	11	25	19	17	36
Tumors of Abdomen.....		1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	5	2	1	1	1	1	5	2	1	6	7
Bowels.....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	...	1	...	1
Brain.....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	1	...	...	4	2	3	3	6
Clavicle.....		1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	1	...	...	1	1
Neck.....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	1	...	1	...	1
Ovary.....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	3	1	...	...	...	3	1	...	4	4
Uterus.....		...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...	...	1	...	...	2	2
Unspecified.....		1	1	...	2	1	1	1	1	1	1	1	...	3	...	...	...	...	5	6	...	...	...	...	1	...	2	9	11
Ulcer of Foot.....		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	1
of Leg.....		1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
Uremia.....		...	...	...	...	1	...	...	...	...	4	1	...	...	2	...	2	1	...	1	2	...	...	...	7	7	8	6	14
Vomiting.....		...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	1	1
Whooping Cough.....	1	9	3	8	3	1	6	2	4	2	5	2	3	2	4	1	3	1	...	2	...	...	...	25	45	...	25	45	70
Worms.....		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1	...	1
Unknown.....	6	4	1	2	1	1	2	1	3	1	3	4	1	1	...	...	3	...	2	1	...	1	4	19	24	21	22	43	

[illegible]

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.	
Trismus Nascentium.....	1	1	1	2
Tuberculosis.....	2	2	..	1	..	..	1	..	1	..	1	1	4	3	5	8	2	3	..	2	1	..	..	..	..	..	..	..	..	..	..	..	19	17	36
Tumors of Abdomen.....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	2	1	1	..	..	..	..	..	..	1	6	7	1
Bowels.....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
Brain.....	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	3	3	6	1
Clavicle.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1
Neck.....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
Ovary.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	4	4	8	2
Uterus.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4	2
Unspecified.....	1	..	..	..	..	..	1	..	1	..	1	..	1	..	1	..	..	2	2	2	2	2	2	2	2	..	2	2	2	2	2	9	11	1	1
Ulcer of Foot.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	1	1
of Leg.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	1	1
Uremia.....	1	..	..	..	..	..	1	..	1	..	..	..	..	2	1	..	1	2	1	1	2	2	2	2	..	..	..	..	..	..	8	6	14	1	1
Vomiting.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	2
Whooping Cough.....	13	20	10	13	2	4	3	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25	45	70	1	1
Worms.....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1
Unknown.....	8	10	3	1	2	1	2	..	..	..	..	1	1	1	1	1	1	1	1	1	1	1	2	1	4	1	..	..	..	21	22	43	43	43	

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1890.

Showing what part of the Mortality in the whole State and in each Division is ascribed to each cause and class of causes.

NUMBER OF DEATHS IN EACH DIVISION OF THE STATE.										PERCENTAGE OF DEATHS IN EACH DIVISION.									
					CAUSES OF DEATH.					Percentage in the Whole State.									

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1890.—Continued.

NUMBER OF DEATHS IN EACH DIVISION OF THE STATE.										PERCENTAGE OF DEATHS IN EACH DIVISION.									
CAUSES OF DEATH.										Percentage in the Whole State.									
Whole State.										Washington County.	Woonsocket.	Providence City.	Pawtucket.	Providence County.	Newport City.	Newport County.	Kent County.	Bristol County.	
1	9	3	13	24	94	6	5	211	Diphtheria.....	1.58	2.10	3.28	3.96	3.51	3.73	2.41	1.92	.40	
3	5	1	4	27	33	5	3	95	Diarrhea.....	.95	1.17	1.19	2.41	1.80	1.15	.81	1.06	1.19	
2	4	2	15	21	30	4	3	87	Dysentery.....	.95	.93	1.05	.99	1.39	4.31	1.61	.85	.79	
1	3	...	...	5	1	10	1	22	Erysipelas.....	.32	.23	.35	.16	.33	...	...	.64	.40
...	4	...	1	4	5	...	...	17	Fever, Cerebro Spinal.....	...	...	.17	.50	.26	.29	...	.85	...
1	...	...	11	10	18	...	1	41	Fever, Intermittent.....	.32	...	.61	1.65	.73	...	...	...	.40
...	...	...	...	1	...	...	...	1	Fever, Remittent.....	.01	...	...	...	.07	...	...	...	...
7	8	2	2	26	43	7	7	107	Fever, Typhoid.....	1.54	1.63	1.54	.66	1.73	.58	2.41	1.70	2.77	
...	...	...	...	4	1	...	...	5	Fever, Unspecified.....	.07	...	.03	...	.26	...	...	...	...
6	14	4	8	30	70	10	5	168	Influenza (Epidemic).....	2.42	2.33	2.43	3.46	.99	2.30	3.20	2.98	2.88	
2	10	...	...	24	31	2	8	92	Measles.....	1.32	.47	1.08	2.57	1.59	...	...	2.12	.79
...	...	...	...	...	1	...	...	1	Mumps.....	.01	...	.03	...	...	...	...	...	...
...	1	...	...	5	10	2	1	19	Measles (Puerperal Fever).....	.28	.47	.35	...	.33	...	...	.21	...
2	2	...	7	18	43	5	2	70	Whooping Cough.....	1.00	1.17	1.04	.66	1.19	2.01	...	.42	.79
...	1	2	1	3	1	...	...	9	Tonsillitis.....	.13	...	.03	.16	.20	.29	1.61	.21	...
...	3	...	...	...	8	...	3	16	Scarlatina.....	.23	...	.28	.33	...	...	...	.64	...
1	...	...	...	...	...	...	...	1	Varicella.....	...	...	...	...	...	...	...	...	.40
<i>Order Two.—Etiologic Diseases.</i>																			
...	...	...	...	2	2	...	...	4	Hydrophobia.....	.06	...	...	.33	.13	...	...	...	...
...	...	1	...	6	6	1	...	14	Septicæmia.....	.20	.23	.21	...	.40	.29	...	...	...
...	...	...	...	9	6	...	...	15	Syphilis.....	.21	...	.21	...	.59	...	...	...	...

<i>Order Three.—Dietic Diseases.</i>														
21	Alcoholism.....	6	2	9	2	.31	.47	.32	.33	.40	.....	.....	.....	.79
4	Delirium Tremens.....	1	.....	2	1	.06	.32	.07	.....	.07	.....	.....	.....	.....
31	Inanition.....	1	1	18	2	.46	.47	.63	.16	.33	.58	.81	.21	.40
5	Purpura and Scurvy.....	1	1	2	.....	.07	.....	.07	.....	.07	.....	.81	.21	.....
<i>Order Four.—Parasitic Diseases.</i>														
1	Worms, etc.....	.....	.....	.....	.....	.01	.....	.....	.....	.....	.....	.....	.21	.....
CLASS II.—CONSTITUTIONAL.														
<i>Order One —Diethetic Diseases.</i>														
46	Dropsy.....	11	4	5	8	.67	.63	1.86	.17	.66	.73	.29	.....	2.12
19	Anæmia.....	2	1	9	2	.28	.95	.47	.32	.16	.13	.29	.81	.....
74	Cancer, Various.....	10	6	27	3	1.07	1.58	.70	.93	.83	.86	2.30	.....	1.28
14	Cancer of Breast.....	1	1	4	2	.20	.63	.....	.14	.16	.20	.58	.81	.40
22	Cancer of Liver.....	2	1	12	1	.34	.....	.23	.42	.66	.13	.....	.....	.21
27	Cancer of Stomach.....	1	2	16	1	.39	.....	.23	.55	.33	.26	.29	.....	.42
28	Cancer of Uterus.....	1	1	15	1	.41	.32	.....	.52	.66	.40	.29	.....	.21
4	Noma (Canker).....	1	.....	2	.....	.06	.....	.....	.07	.....	.07	.....	.....	.21
20	Mortification.....	3	1	12	.....	.29	.....	.....	.42	.....	.26	.29	.....	.64
45	Rheumatism.....	2	1	19	2	.65	.63	.47	.67	1.65	.53	.29	.....	.21
<i>Order Two.—Tubercular Diseases.</i>														
11	Scrofula.....	1	2	4	2	.15	.32	.47	.14	.....	.13	.20	.....	.21
11	Tabes Mesenterica.....	1	.....	10	.....	.15	.....	.....	.35	.....	.07	.....	.....	.....
852	Phthisis (Pulmonalis).....	31	38	394	73	12.29	10.38	17.05	13.69	9.74	11.44	12.06	7.25	8.08
25	Hydrocephalus.....	1	.....	9	5	.37	.....	1.17	.32	.16	.46	.58	.....	.40
47	Tubercular Meningitis.....	1	2	31	2	.68	.95	.47	1.08	.66	.26	.29	.....	.42
36	Tuberculosis.....	1	1	24	2	.53	.63	.....	.82	.33	.33	.29	.81	.40
CLASS III.—LOCAL.														
<i>Order One.—Diseases of the Nervous System.</i>														
170	Cephalitis.....	6	16	69	15	2.45	1.27	3.50	2.39	3.14	2.31	2.30	1.61	2.12
2	Cerebritis.....	1	.....	1	.....	.03	.....	.....	.03	.....	.07	.....	.....	.....
242	Apoplexy.....	11	15	117	9	3.49	3.47	2.10	4.07	3.63	2.98	2.30	1.61	3.19

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1890.—Continued.

NUMBER OF DEATHS IN EACH DIVISION OF THE STATE.										PERCENTAGE OF DEATHS IN EACH DIVISION.											
CAUSES OF DEATH.										Percentage in the Whole State.											
Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket.	Providence City.	Woonsocket.	Washington County.	Whole State.												
10	6	6	5	24	4	27	6	11	99	Paralysis.	.....	1.42	3.47	1.40	.98	.66	1.59	1.15	4.85	1.28	3.95
1	1	1	1	12	1	14	...	...	30	Insanity.	.....	.44	...	...	.47	.16	.80	...	.81	.21	.40
2	1	1	2	9	...	9	...	...	23	Epilepsy.	.....	.35	...	...	.32	...	.59	.58	.81	.42	...
1	...	1	...	...	...	2	...	...	4	Tetanus.	.....	.06	...	...	.07	...	...	.29	...	...	...
2	10	3	2	51	8	69	7	4	156	Convulsions.	.....	2.24	1.27	1.63	2.39	1.32	3.38	.58	2.41	2.12	.79
1	3	4	1	13	6	15	1	1	45	Brain Diseases.	.....	.65	.32	.23	.52	.99	.86	.29	3.20	.64	.40
<i>Order Two.—Diseases of the Circulatory System.</i>																					
1	2	...	1	1	4	16	1	1	27	Pericarditis.	.....	.39	.32	.23	.55	.66	.07	.29	...	.42	.40
...	...	1	1	...	2	4	...	...	8	Aneurism.	.....	.11	...	...	.14	.33	...	.29	.81	...	...
14	47	6	20	61	29	156	18	27	378	Heart Diseases.	.....	5.45	8.48	4.21	5.43	4.78	4.04	5.73	4.85	10.00	5.14
<i>Order Three.—Diseases of the Respiratory Organs.</i>																					
...	...	...	...	...	...	1	...	...	1	Epistaxis.	.....	.01	...	...	.03	...	...	...	...	...	...
...	...	...	...	2	...	2	...	...	5	Laryngitis.	.....	.07	...	...	.07	...	...	.29	...	...	...
3	4	3	11	47	24	124	12	6	234	Bronchitis, Acute.	.....	3.39	1.87	2.77	4.32	3.96	3.11	3.16	2.41	.85	1.19
2	...	...	...	17	5	14	2	...	41	Bronchitis, Chronic.	.....	.62	...	.47	.47	.83	1.13	.29	...	...	.79
...	...	...	...	1	11	5	...	...	18	Pleurisy.	.....	.27	.32	...	.17	1.81	.07	...	...	...	...
16	36	8	22	114	69	246	23	35	569	Pneumonia.	.....	8.20	11.01	5.37	8.55	11.40	7.54	4.32	6.45	7.66	6.32
...	3	2	2	7	5	1	2	1	23	Asthma.	.....	.35	.32	.47	.03	.83	.46	.58	1.61	.64	...
...	2	...	...	11	1	4	...	...	18	Lung Diseases.	.....	.27	...	...	.14	.16	.73	...	...	.42	...

Order Four.—Diseases of the Digestive Organs.

1	5	2	2	12	3	12	1	38	Gastritis.....	.55	.23	.42	.50	.80	.58	1.61	1.06	.40
2	3	3	1	28	5	5	5	63	Enteritis.....	.91	1.58	1.17	.99	.66	.29	2.41	.64	.79
4	3	4	10	7	30	3	2	63	Peritonitis.....	.91	.63	1.04	1.15	.66	1.15	.....	.64	1.58
...	...	...	1	...	...	...	1	2	Ascites.....	.03	.23	.....	.33	.07	.....	.....	.....	...
1	2	1	1	7	2	...	...	16	Hernia.....	.23	...	.24	.33	.13	.29	.81	.42	.40
...	1	1	1	13	...	...	2	20	Illeus.....	.29	.63	.42	...	.13	.29	.81	.21	...
...	...	...	...	2	...	...	...	2	Intussusception.....	.03	...	.07	...	...	...	...	...	...
...	...	...	...	1	...	...	1	1	Stricture of Intestines.....	.01	...	.03	...	...	...	...	...	...
...	...	...	...	1	...	...	...	1	Fistula.....	.01	...	.03	...	...	...	...	...	...
1	7	1	6	14	2	2	2	35	Stomach Diseases.....	.51	.63	.47	.16	.40	.29	1.49	.79	...
1	...	1	1	3	1	1	1	9	Hepatitis.....	.13	.32	.23	.11	.07	.29	.81	...	.40
...	2	...	1	9	1	2	...	15	Jaundice.....	.22	.62	.23	...	.07	...	.42	...	...
2	4	4	10	7	23	2	4	56	Liver Diseases.....	.81	1.27	.47	.78	1.15	.40	1.15	.85	.79
...	3	1	5	3	...	...	...	14	Bowel Diseases.....	.20	...	.11	.33	.33	...	.81	.64	...

Order Five.—Dis of Urinary Organs

Order Five.—Dis. of Urinary Organs																		
1	4	7	2	29	...	3	46	Nephritis	...	.66	.95	1.01	.33	.46	1.15	.81	...	...
...	...	1	...	...	...	...	1	Ischuria	...	.01	...	...	...	.07	...	...	...	...
14	7	2	12	32	12	7	167	Nephria (Bright's Disease)	...	2.40	2.19	.47	2.76	2.11	3.45	1.61	1.49	5.14
4	2	1	2	5	2	7	3	1	27	Diabetes	.36	.32	.70	.24	.33	.58	.81	.42
...	...	...	...	2	...	...	2	Calculus (Gravel, &c.)	...	.03	.32	.97	.33	.29	1.61	.64	.40	...
1	3	2	1	5	2	20	1	1	36	Cystitis	.53	.32	.23	.70	.33	.29	.21	...
...	1	...	...	...	...	1	...	2	Prostate, Disease of	.03	...	.03	...	...	...	...	...	...
1	1	1	2	1	...	8	1	...	16	Kidney Diseases	.23	...	.23	.28	.13	.29	.81	.21
...	...	1	2	...	...	...	3	Bladder Diseases	...	.04	...	...	...	.07	...	...	...	...

Order Six.—Diseases of the Generative Organs.

...	...	...	...	...	1	3	...	...	4	Ovarian Dropsy.....	.06	...	.11	.16	...	...	...	...	...
...	...	...	...	...	...	4	...	...	4	Uterine Diseases.....	.06	...	.14	...	...	...	...	...	...

Order Seven.—Osteous and Locomotory System.

...	1	...	2	...	...	4	...	...	7	Diseases of Bones.....	.10	...	.14	.13	...	...	.21	...	...
...	...	...	2	...	...	2	...	...	3	Joint Diseases.....	.04	...	.03	.13	...	...	...	...	...
...	2	...	4	...	...	5	...	2	15	Diseases of Vertebrae.....	.21	.63	.17	.26	...	...	.42	...	...

TABLE X.—*Causes of Deaths Registered in Rhode Island,*

Class.	CAUSES OF DEATH. ¹	1854.	1855.	1856.	1857.	1858.
	ALL CAUSES.....	1,806	1,970	2,225	2,510	2,793
	SPECIFIED CAUSES.....	1,655	1,782	1,919	2,222	2,483
	[CLASSES.]					
I.	ZYMOTIC DISEASES.....	596	457	567	570	716
II.	CONSTITUTIONAL DISEASES.....	553	479	447	573	620
III.	LOCAL DISEASES.....	329	434	475	563	614
IV.	DEVELOPMENTAL DISEASES.....	221	338	369	434	446
V.	VIOLENT DEATHS.....	56	74	61	82	87
	[ORDERS.]					
I.	1. Miasmatic Diseases.....	580	441	548	537	676
	2. Enthetic Diseases.....	....	2	3	....	4
	3. Dietic Diseases.....	11	8	15	29	26
	4. Parasitic Diseases.....	5	6	1	4	10
II.	1. Diathetic Diseases.....	58	68	88	106	112
	2. Tubercular Diseases.....	395	411	359	467	508
	DISEASES OF—					
III.	1. Nervous System.....	161	181	185	221	223
	2. Organs of Circulation.....	40	66	43	67	67
	3. Respiratory Organs.....	73	103	151	164	198
	4. Digestive Organs.....	43	57	67	68	93
	5. Urinary Organs.....	4	13	10	26	17
	6. Organs of Generation.....	4	3	5	2	7
	7. Organs of Locomotion.....	1	2	7	6	6
	8. Integumentary System.....	3	9	7	9	3
	DEVELOPMENTAL DISEASES OF—					
IV.	1. Children.....	119	198	221	249	253
	2. Women.....	7	9	14	13	24
	3. Old People.....	67	84	76	119	114
	4. Diseases of Nutrition.....	28	47	58	53	55
V.	1. Accident or Negligence.....	53	57	56	73	73
	2. Battle.....	....	....	....	....	....
	3. Homicide.....	....	9	1	1	1
	4. Suicide.....	3	8	4	8	13
	CAUSES ILL-DEFINED.....	20	19	14	30	14
	CAUSES NOT STATED.....	131	169	292	258	296

¹ Stillborns included only in this table.

for each of the Thirty-seven Years, 1854 to 1890.

1850.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
2,447	2,853	3,073	2,714	3,318	3,498	3,582	3,142	3,052	3,124	3,602	3,472	3,567	4,449	4,631
2,184	2,628	2,853	2,505	3,081	2,255	3,335	2,038	2,827	2,788	3,251	3,276	3,275	3,986	4,344
512	644	771	599	1,063	1,158	1,244	768	595	602	878	793	730	1,117	1,238
598	698	729	702	713	687	744	725	748	718	814	834	808	868	879
564	715	788	674	748	816	717	808	837	786	848	885	975	1,167	1,242
421	436	457	423	427	478	497	505	525	567	589	627	635	683	829
89	135	108	107	125	116	103	132	122	115	122	137	127	146	156
472	607	724	565	1,019	1,113	1,224	750	569	582	853	761	694	1,083	1,215
12	2	5	4	6	5	2	6	6	3	2	6	6	10	4
23	29	34	24	36	31	10	7	11	11	20	20	19	23	14
5	6	8	6	7	9	8	5	9	6	3	6	11	1	5
96	131	126	122	141	123	139	132	123	130	144	167	151	187	198
502	567	603	580	572	564	635	593	625	588	670	667	657	681	681
217	245	287	231	272	294	281	293	316	274	319	339	365	423	450
64	73	108	113	99	124	99	117	115	116	128	120	146	190	193
161	215	224	175	217	236	208	239	214	235	239	235	269	313	322
88	136	101	112	104	114	86	111	120	87	97	116	117	136	154
23	29	27	25	35	28	26	29	43	46	46	48	57	77	85
....	1	9	1	3	1	4	1	1	2	....	1	....	5	3
9	5	15	8	9	7	5	5	6	12	11	15	5	11	18
2	11	17	9	9	12	8	13	22	14	8	11	16	12	17
247	255	244	210	205	220	280	261	270	298	293	339	311	350	462
14	13	19	23	21	23	18	24	26	22	27	28	34	36	29
117	116	132	143	161	193	152	178	188	206	217	204	232	233	254
43	52	62	47	40	42	47	42	41	41	52	56	58	69	84
79	119	93	91	104	106	90	119	102	97	105	105	108	126	145
....	....	....	7	3	2	1	1	....	....	....	....	....	....	....
1	4	3	1	5	2	....	1	5	....	2	5	....	2	3
9	12	12	8	13	6	12	11	15	18	15	27	19	18	8
22	37	18	21	20	34	40	33	30	48	51	59	43	87	70
241	188	202	188	217	209	207	171	195	288	300	137	249	376	217

TABLE X.—*Causes of Deaths registered in Rhode Island,*

Class.	CAUSES OF DEATH. ¹	1874.	1875.	1876.	1877.	1878.	1879.
	ALL CAUSES.....	4,506	4,563	4,340	4,692	4,689	4,688
	SPECIFIED CAUSES.	4,297	4,300	4,095	4,444	4,430	4,386
	[CLASSES.]						
I.	ZYMOTIC DISEASES.....	1,242	1,028	990	1,338	1,234	1,158
II.	CONSTITUTIONAL DISEASES.....	786	940	968	997	986	975
III.	LOCAL DISEASES.....	1,283	1,404	1,303	1,254	1,371	1,465
IV.	DEVELOPMENTAL DISEASES.....	836	757	681	693	680	661
V.	VIOLENT DEATHS	150	171	153	162	159	127
	[ORDERS.]						
I.	1. Miasmatic Diseases.....	1,203	992	946	1,296	1,202	1,128
	2. Enthetic Diseases.....	11	11	12	17	10	12
	3. Dietic Diseases.....	25	18	27	17	16	16
	4. Parasitic Diseases.....	3	7	5	8	6	2
II.	1. Diathetic Diseases.....	155	193	199	231	185	221
	2. Tubercular Diseases.....	631	747	769	766	801	754
	DISEASES OF—						
III.	1. Nervous System.....	418	441	437	463	481	524
	2. Organs of Circulation.....	217	191	168	187	172	208
	3. Respiratory Organs.....	349	405	429	322	430	418
	4. Digestive Organs.....	172	159	148	153	165	165
	5. Urinary Organs.....	85	85	69	98	92	113
	6. Organs of Generation.....	3	1	2	4	1	...
	7. Organs of Locomotion.....	15	16	27	15	10	20
	8. Integumentary System.....	24	16	23	12	20	17
	DEVELOPMENTAL DISEASES OF—						
IV.	1. Children.....	490	416	332	362	368	326
	2. Women.....	44	35	30	29	26	36
	3. Old People.....	223	216	241	213	222	220
	4. Diseases of Nutrition.....	79	90	78	89	64	79
V.	1. Accident or Negligence.....	128	142	131	137	135	113
	2. Battle.....	...	...	...	...	...	...
	3. Homicide.....	4	3	4	3	3	1
	4. Suicide.....	18	26	18	22	21	13
	CAUSES ILL-DEFINED.....	57	56	32	56	49	48
	CAUSES NOT STATED.....	152	207	213	192	210	254

¹ Stillborns included only in this table.

for each of the Thirty-seven years, 1854 to 1890.—Continued.

1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Total and Percentage for 35 Years, 1854-1889.	
5,021	5,280	5,327	5,535	5,413	5,660	6,142	6,616	6,889	6,588	7,230	141,189	100.00
4,742	4,878	5,011	5,327	5,352	5,544	6,052	6,562	6,815	6,500	7,142	132,822	94.07
1,300	1,190	1,170	1,077	1,145	1,074	1,311	1,764	1,644	1,374	1,755	34,288	24.29
930	1,069	1,051	1,136	1,119	1,194	1,236	1,084	1,214	1,165	1,281	29,542	20.92
1,613	1,660	1,756	2,024	1,961	2,205	2,357	2,498	2,663	2,635	2,784	41,802	29.61
742	777	819	905	906	870	945	992	1,078	1,083	1,051	22,254	15.76
157	182	215	185	221	201	213	224	216	243	271	4,936	3.49
1,269	1,151	1,119	1,012	1,075	1,008	1,251	1,684	1,563	1,273	1,660	32,912	23.31
10	8	17	21	30	19	23	33	40	25	33	362	.25
21	29	32	42	38	47	35	46	40	74	61	850	.62
....	2	2	2	2	....	2	1	1	2	1	164	.11
205	239	213	260	253	296	262	264	307	312	299	6,025	4.26
725	830	838	876	866	898	964	820	907	853	982	23,517	16.66
551	591	602	634	650	642	727	779	805	697	771	14,323	10.14
237	271	262	333	293	354	333	411	442	467	413	6,166	4.37
508	464	481	577	517	670	696	721	792	805	909	12,060	8.54
169	187	245	236	250	253	319	310	329	356	335	5,267	3.73
119	110	118	173	178	215	222	220	244	272	300	2,835	2.01
7	3	6	26	14	14	12	14	10	10	8	170	.12
15	11	25	26	32	34	26	23	15	18	25	473	.34
7	23	17	19	27	23	22	20	26	10	22	508	.36
326	410	408	456	448	453	502	539	596	598	587	11,717	8.29
36	38	22	44	39	28	31	29	33	27	26	924	.66
273	247	283	275	293	267	276	278	290	227	193	7,003	4.96
107	82	106	130	126	122	136	146	159	231	240	2,610	1.85
146	155	178	157	197	178	194	206	190	216	250	4,288	3.04
....	....	....	....	....	....	....	....	....	....	....	14	.01
1	4	6	3	2	3	2	2	5	3	2	92	.07
10	23	31	25	22	20	17	16	21	24	19	542	.37
46	55	45	22	19	57	39	35	46	49	45	1,372	.98
233	347	271	186	42	59	51	19	25	39	43	6,995	4.95

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1854.	1855.	1856.	1857.	1858.
I.	ORDER 1.					
	1. Small Pox ¹	11	5	9	....	1
	2. Measles.....	15	3	2	6	75
	3. Scarlet Fever.....	46	71	208	147	234
	4. Diphtheria.....	....	....	....	....	6
	5. Cerebro Spinal Meningitis.....	....	....	....	....	....
	6. Quinsy ².....	....	....	....	....	....
	7. Croup.....	43	48	62	70	66
	8. Whooping Cough.....	14	4	19	9	13
	9. Typhoid Fever ³	39	63	53	76	42
	10. Erysipelas.....	8	15	12	14	20
	11. Metria (Puerperal Fever).....	2	6	10	8	7
	12. Carbuncle.....	....	....	1	....	1
	13. Influenza.....	1	4	....	15	6
	14. Diarrhœa.....	24	51	34	52	42
	15. Dysentery.....	118	71	51	65	61
	16. Cholera Infantum.....	68	91	77	70	93
	17. Cholera ⁴	191	7	6	3	2
	18. Intermittent Fever.....	....	....	1	....	....
	19. Remittent Fever ⁵.....	....	2	3	2	4
	ORDER 2.					
	1. Syphilis.....	....	1	2	....	3
	2. Gonorrhœa.....	....	....	....	....	....
	3. Hydrophobia.....	....	....	1	....	....
	4. Glanders.....	....	....	....	....	....
	5. Malignant Pustule.....	....	1	....	....	1
	6. Septicæmia.....	....	....	....	....	....
	ORDER 3.					
	1. Inanition.....	1	....	1	....	....
	2. Puerpera and Scurvy.....	....	1	1	4	5
	3. Alcoholism, { Delirium Tremens.....	5	4	5	10	13
	{ Intemperance.....	5	3	8	15	8
	ORDER 4.					
	1. Thrush.....	4	5	1	3	9
	2. Worms.....	1	1	....	1	1
II.	ORDER 1.					
	1. Gout.....	....	....	....	....	....
	2. Dropsy.....	31	32	50	48	44
	3. Anæmia.....	6	4	4	6	12
	4. Cancer.....	18	27	26	37	44
	5. Noma (Canker).....	....	....	....	....	1
	6. Mortification.....	2	3	4	8	7
	7. Rheumatism.....	1	2	4	7	4
	ORDER 2.					
	1. Scrofula.....	5	8	7	11	11
	2. Tabes Mesenterica.....	....	....	....	4	6
	3. Phthisis (Consumption).....	349	345	305	400	426
	4. Hydrocephalus (Tubercular Meningitis).....	40	58	47	52	65
	5. Tuberculosis.....	1	....	....	....	....
III.	ORDER 1.					
	1. Cephalitis.....	19	26	19	25	42
	2. Apoplexy.....	25	33	39	42	43
	3. Paralysis.....	6	20	9	21	21
	4. Insanity.....	6	8	14	16	14
	5. Chorea.....	....	....	....	1	....
	6. Epilepsy.....	....	8	6	8	9
	7. Tetanus.....	3	3	4	6	1
	8. Convulsions.....	68	55	64	57	57
	9. Brain Diseases, etc.....	34	31	30	45	36
	ORDER 2.					
	1. Pericarditis.....	2	1	1	2	....
	2. Aneurism.....	....	1	1	....	1
	3. Heart Diseases, etc.....	38	63	41	65	66

¹ Includes Chicken Pox. ² Includes Mumps. ³ Includes Billious, Typhus and Continued Fevers.

Causes of Deaths Registered in Rhode Island.

1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
5	9	5	7	7	12	22	2	1	2	3	6	12	25	28
3	8	11	12	36	26	16	15	12	20	19	26	6	24	63
71	64	57	47	91	266	255	28	14	93	256	75	66	54	287
20	67	140	81	155	160	82	64	31	20	33	33	57	48	45
....	....	....	....	....	2	5	1	4	3	1	3	14	23	62
....	3	....	1	....	2	1	....	....	....	1	3	....	....	1
58	57	58	76	97	105	94	53	50	30	41	53	72	66	68
46	46	45	15	24	31	56	28	12	26	48	39	25	27	32
70	67	94	84	128	116	233	152	126	86	106	157	130	190	172
15	26	14	11	14	28	21	16	25	25	14	21	18	23	39
11	9	7	4	14	14	13	7	8	12	10	16	18	9	17
1	....	1	....	....	....	1	2	....	1	2	1	2	....	1
2	2	3	3	6	5	1	1	1	2	....	....	....	1	1
49	41	44	60	62	93	76	49	39	45	50	47	45	100	64
53	49	96	52	262	110	188	148	118	52	74	55	43	83	36
61	151	134	106	114	133	145	110	117	154	151	213	172	391	285
6	7	12	6	9	9	14	72	11	10	11	11	13	18	13
....	....	....	....	....	1	....	2	....	....	2	....	....	....	....
1	1	3	....	....	....	1	....	....	1	1	2	1	1	1
5	2	5	3	2	5	2	5	5	3	....	5	6	9	3
....	....	....	1	....	....	....	....	1	....	....	....	....	....	....
1	....	....	....	1	....	....	....	....	....	....	....	....	....	....
....
6	....	....	....	3	....	....	1	....	....	2	1	....	1	1
....
....
1	3	4	2	4	4	....	....	1	1	2	3	2	....	....
7	10	4	5	7	4	3	3	5	4	9	2	7	6	4
15	16	26	17	25	23	7	4	5	6	9	14	10	17	10
3	3	4	4	3	8	5	2	8	4	3	4	11	....	5
2	3	4	2	4	1	3	3	1	2	....	2	....	1	....
....
41	56	48	46	52	45	61	49	49	49	53	61	56	55	60
2	5	3	4	12	4	3	3	2	4	4	2	6	4	3
43	44	58	61	62	61	55	64	58	60	66	80	66	95	106
....	....	1	....	....	1	....	2	....	....	....	1	5	5	11
3	10	10	7	8	5	12	4	7	6	4	7	9	7	11
7	16	6	4	7	7	8	10	7	11	17	17	13	21	17
8	9	14	14	13	14	12	5	9	3	11	19	22	9	20
2	1	3	3	....	3	7	2	2	2	10	4	5	5	7
436	505	523	513	512	498	547	526	563	517	555	577	535	600	584
56	52	63	50	47	49	63	56	41	57	76	51	71	44	52
....	....	....	....	....	....	6	4	10	9	18	16	24	23	18
20	41	43	36	54	40	39	46	52	40	54	42	44	57	109
51	51	57	43	52	54	55	56	72	57	69	64	77	58	67
28	32	40	36	31	42	45	36	52	54	48	66	79	67	67
16	11	13	7	10	15	20	13	14	13	14	18	16	26	19
2	....	....	....	....	....	....	....	....	1	....	....	....	....	....
6	4	11	6	6	3	7	4	12	5	5	4	10	13	15
3	5	5	6	8	4	6	3	3	3	2	5	5	8	2
50	70	70	55	71	73	73	83	68	63	79	85	83	116	97
41	31	48	42	40	54	36	52	43	38	48	55	51	78	74
1	3	2	....	....	....	1	....	....	....	....	....	....	....	....
1	1	1	2	....	1	....	1	....	1	....	3	2	1	2
62	69	105	111	99	123	98	116	114	116	128	117	144	189	191

^a Includes Cholera Morbus. ^b Includes Yellow Fever.

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1874.	1875.	1876.	1877.	1878.	1879.
I.	ORDER 1.						
	1. Small Pox ¹	8	4	1	5	1	1
	2. Measles.....	7	2	4	11	81	....
	3. Scarlet Fever.....	462	185	80	62	86	311
	4. Diphtheria.....	59	33	159	492	435	259
	5. Cerebro Spinal Meningitis.....	16	13	7	8	11	10
	6. Quinsy ².....	....	....	....	4	3	....
	7. Croup.....	65	96	102	95	93	96
	8. Whooping Cough.....	45	31	48	32	54	43
	9. Typhoid Fever ³	121	150	123	123	136	101
	10. Erysipelas.....	26	21	18	21	17	25
	11. Puerperal Fever.....	16	18	18	17	17	9
	12. Carbuncle.....	....	1	1	3	....	1
	13. Influenza.....	2	6	....	1	....	4
	14. Diarrhœa.....	65	70	72	90	53	53
	15. Dysentery.....	38	36	50	52	40	44
	16. Cholera Infantum.....	265	318	250	259	168	161
	17. Cholera ⁴	8	8	13	20	6	8
	18. Intermittent Fever.....	....	....	....	1	....	....
	19. Remittent Fever ⁵.....	....	....	....	....	1	2
	ORDER 2.						
	1. Syphilis.....	7	8	8	10	4	10
	2. Gonorrhœa.....	....	1	2	2	....	....
	3. Hydrophobia.....	....	1	2	2	3	....
	4. Glanders.....	....	....	....	1	....	....
	5. Malignant Pustule.....	1	....	....	2	....	....
	6. Septicæmia.....	3	1	....	....	3	2
	ORDER 3.						
	1. Inanition.....	....	....	1	....	....	....
	2. Purpura and Scurvy.....	3	1	5	5	1	1
	3. Alcoholism, { Delirium Tremens.....	3	4	6	4	3	3
	{ Intemperance.....	19	13	15	8	12	12
	ORDER 4.						
	1. Thrush.....	2	5	4	8	4	1
	2. Worms.....	1	2	1	....	2	1
II.	ORDER 1.						
	1. Gout.....	....	....	....	....	....	....
	2. Dropsy.....	39	56	66	63	38	50
	3. Anæmia.....	2	4	2	1	2	8
	4. Cancer.....	87	95	106	135	119	125
	5. Noma (Canker).....	....	2	....	....	1	1
	6. Mortification.....	5	10	11	8	9	13
	7. Rheumatism.....	22	26	14	24	16	24
	ORDER 2.						
	1. Scrofula.....	20	21	18	11	13	13
	2. Tabes Mesenterica.....	3	4	5	10	6	3
	3. Phthisis (Consumption).....	536	657	660	665	685	645
	4. Hydrocephalus (Tubercular Meningitis).....	51	57	68	55	70	57
	5. Tuberculosis.....	21	8	18	25	27	36
III.	ORDER 1.						
	1. Cephalitis.....	60	66	80	81	81	79
	2. Apoplexy.....	70	67	95	109	102	137
	3. Paralysis.....	86	99	70	72	86	83
	4. Insanity.....	13	32	19	12	22	17
	5. Chorea.....	....	....	....	1	....	....
	6. Epilepsy.....	16	20	12	19	8	13
	7. Tetanus.....	8	5	2	5	8	6
	8. Convulsions.....	98	100	89	83	112	104
	9. Brain Diseases, etc.....	67	52	70	81	62	85
	ORDER 2.						
	1. Pericarditis.....	....	....	....	....	....	....
	2. Aneurism.....	1	4	2	4	6	1
	3. Heart Diseases, etc.....	216	187	166	183	166	207

¹ Includes Chicken Pox. ² Includes Mumps. ³ Includes Billous, Typhus and Continued Fevers.

Causes of Death Registered in Rhode Island.

1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Total and Percentage for 35 Years, 1854-1888.	
....	3	2	2	....	....	....	....	....	....	1	199	.14
9	37	6	14	18	45	15	132	11	29	92	793	.53
468	138	45	34	97	91	88	266	297	51	16	5,080	3.60
152	216	101	95	119	99	228	287	191	184	211	3,967	2.83
20	18	28	26	21	16	10	24	22	9	17	368	.26
1	2	....	3	1	1	1	8	4	7	10	40	.03
66	101	77	71	80	94	90	113	79	80	83	2,588	1.84
20	68	71	9	43	42	49	21	44	77	70	1,179	.84
141	117	214	239	128	165	121	116	224	135	107	4,343	3.08
17	37	30	28	25	36	31	32	31	28	22	774	.53
15	22	28	16	12	13	10	25	18	17	19	462	.33
....	2	1	3	4	1	2	3	....	....	2	36	.03
....	3	1	....	2	2	7	....	7	4	168	89	.07
70	77	90	139	113	84	93	133	80	88	95	2,340	1.68
28	42	68	54	40	36	66	66	77	71	87	2,522	1.80
247	249	325	242	325	279	377	355	467	427	582	7,114	4.98
11	18	24	25	18	24	17	18	30	26	26	679	.48
....	1	8	21	29	34	43	83	69	38	41	295	.22
4	9	....	....	....	....	....	2	2	2	1	44	.04
10	4	16	18	14	7	12	13	11	13	15	218	.15
....	2	....	....	....	1	1	1	2	1	....	14	.01
....	....	....	....	....	....	....	....	1	2	4	12	.01
....	....	....	....	....	....	....	....	....	....	....	1	.00
....	1	1	....	3	1	....	1	2	1	....	29	.02
....	1	....	3	13	10	10	18	24	8	14	88	.07
....	2	1	10	7	22	20	28	19	30	31	112	.08
6	3	4	3	1	3	3	2	5	7	5	84	.07
1	10	7	8	3	5	3	1	2	6	4	181	.13
14	14	21	21	27	17	9	15	14	31	21	473	.34
....	1	2	2	2	....	2	1	....	2	....	123	.08
....	1	....	....	....	....	....	....	1	....	4	41	.03
....	....	....	....	1	....	1	1	....	2	....	3	.00
37	47	50	47	40	44	47	39	47	44	46	1,696	1.20
8	4	4	7	7	6	15	16	13	21	9	192	.14
125	145	132	169	156	193	159	159	193	189	165	3,229	2.26
2	....	....	1	5	....	....	....	....	3	4	24	.02
9	14	6	9	10	19	6	15	19	23	21	297	.22
24	29	21	27	34	34	34	34	35	30	45	584	.42
12	15	14	22	20	18	23	21	12	17	11	477	.35
3	8	4	5	15	7	19	6	13	11	11	177	.13
652	712	744	766	739	783	827	710	801	727	852	20,397	14.44
46	56	49	54	56	47	54	54	50	58	72	1,914	1.35
12	39	27	29	36	43	41	29	32	40	36	552	.39
88	107	95	91	78	94	104	112	133	109	172	2,206	1.57
119	146	154	157	182	185	230	206	211	210	242	3,235	2.27
96	101	111	118	116	104	107	122	156	113	99	2,327	1.67
19	32	23	29	36	35	49	64	43	22	30	728	.51
3	....	....	1	....	....	2	1	2	1	....	14	.01
14	13	14	18	11	23	14	17	16	19	23	379	.26
3	8	8	8	5	1	8	7	9	7	4	179	.13
133	102	110	126	139	111	121	159	154	136	156	3,176	2.23
76	82	87	86	83	86	92	91	81	80	45	2,088	1.49
....	....	....	17	....	10	21	29	23	29	27	113	.08
2	2	2	8	3	1	2	5	6	7	8	71	.05
235	269	260	308	290	345	310	377	413	431	378	5,982	4.24

* Includes Cholera Morbus. * Includes Yellow Fever.

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1854.	1855.	1856.	1857.	1858.
III.	ORDER 3.					
	1. Epistaxis.....	.....	.....	.....	2	5
	2. Laryngitis.....	1	1	5	2	5
	3. Bronchitis.....	3	4	5	7	13
	4. Pleurisy.....	10	12	13	10	12
	5. Pneumonia.....	54	79	120	141	166
	6. Asthma.....	2	2	3	2	2
	7. Lung Diseases, etc.....	3	5	5	2	....
	ORDER 4.					
	1. Gastritis.....	3	3	8	9	1
	2. Enteritis.....	11	13	14	13	23
	3. Peritonitis.....	2	13	17	5	10
	4. Ascites.....	3	.....	.....	.....	.....
	5. Ulceration of Intestines.....	.....	.....	.....	.....	.....
	6. Hernia.....	2	2	.....	.....	5
	7. Ileus.....	3	10	10	9	6
	8. Intussusception.....	.....	.....	.....	.....	.....
	9. Stricture of Intestines.....	.....	1	.....	2	.....
	10. Fistula.....	.....	.....	.....	.....	1
	11. Stomach Diseases.....	5	4	11	7	8
	12. Pancreas Diseases.....	.....	.....	.....	.....	.....
	13. Hepatitis.....	.....	.....	.....	.....	.....
	14. Jaundice.....	2	2	.....	3	4
	15. Liver Diseases, etc.....	6	6	7	18	31
	16. Spleen Diseases, etc.....	2	.....	.....	.....	.....
	17. Bowel Diseases, etc.....	4	3	.....	2	4
	ORDER 5.					
	1. Nephritis (Bright's Disease, etc).....	.....	.....	.....	.....	.....
	2. Ischuria.....	.....	2	.....	2	.....
	3. Diabetes.....	.....	3	3	3	.....
	4. Calculus (Gravel, etc).....	1	.....	.....	.....	2
	5. Cystitis.....	1	1	2	.....	.....
	6. Prostate Disease.....	1	.....	.....	5	2
	7. Kidney Diseases, etc.....	1	5	5	13	8
	8. Bladder Diseases, etc.....	.....	2	.....	3	2
	ORDER 6.					
	1. Ovarian Dropsy.....	.....	2	3	.....	4
	2. Uterine Diseases, etc.....	4	1	2	2	3
	ORDER 7.					
	1. Arthritis.....	.....	.....	.....	.....	.....
	2. Joint Diseases, etc.....	1	2	7	6	6
	ORDER 8.					
	1. Phlegmon.....	.....	7	4	3	3
	2. Ulcer.....	2	.....	1	2	.....
	3. Skin Diseases, etc.....	1	2	2	4	1
V.	ORDER 1.					
	1. Still-born.....	78	124	183	185	177
	2. Infantile Debility.....	13	34	17	17	33
	3. Cynosis.....	1	1	1	.....	.....
	4. Spina Bifida.....	.....	.....	.....	.....	2
	5. Other Malformations.....	7	11	5	12	12
	6. Teething.....	20	28	15	35	29
	ORDER 2.					
	1. Puerperia.....	.....	.....	.....	.....	.....
	2. Childbirth.....	7	9	14	13	24
	ORDER 3.					
	1. Old Age.....	67	81	76	119	114
	ORDER 4.					
	1. Atrophy and Debility.....	28	47	58	53	55

Causes of Deaths Registered in Rhode Island.

1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
4	8	2	1	1	1	1	1	1	2	4	2	2	2	4
9	18	18	7	17	7	10	17	19	22	20	28	24	26	20
18	20	21	17	14	16	16	20	16	13	19	12	18	12	14
125	162	163	147	174	201	175	193	172	191	190	182	218	229	234
2	3	8	3	8	7	3	4	4	5	3	8	4	4	7
3	4	12	....	3	4	3	4	2	2	3	3	3	40	34
4	11	....	4	8	11	6	2	9	7	9	10	...	16	10
21	23	24	30	27	27	20	30	34	19	25	29	36	15	24
13	14	7	14	5	19	13	13	11	9	6	8	11	24	17
....
1	2	5	4	7	2	5	1	6	5	4	6	7	2	4
6	16	9	7	5	5	7	9	11	6	8	5	13	3	5
1	1	....	....	....	1	1	1	2	1	1	1	....	1	2
....	1	....	....	1	....	....	....	....	....	....	....	....	....	1
8	9	17	8	12	4	2	4	8	7	2	8	14	13	15
6	9	....	6	....	4	4	7	5	4	6	6	....	2	....
3	7	4	5	2	3	3	6	3	4	3	2	....	2	2
20	31	31	32	34	37	20	37	30	23	28	37	35	31	43
....	....	....	....	1	....	1	....	1	....	2	....	....	....	2
5	12	4	2	2	1	4	1	....	2	3	4	1	27	29
3	1	....	....	....	....	....	8	17	16	18	15	24	37	39
....	1	....	....	....	....	1	....	....	....	....	....	....	7	8
3	8	8	2	4	6	6	6	1	11	6	8	5	7	8
1	1	....	1	4	2	2	2	3	3	3	1	4	5	2
4	2	....	4	4	....	....	....	....	....	....	....	....	....	....
....	1	1	....	....	....	2	....	....	3	1	2	2	2	4
12	15	15	17	22	16	13	8	15	8	14	16	19	18	27
....	....	3	1	1	4	2	5	7	5	4	6	3	8	5
....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
....	1	7	1	3	1	4	1	1	2	....	1	....	5	3
9	5	15	8	9	7	5	5	6	12	11	15	5	11	18
1	7	11	4	7	9	7	8	15	10	4	9	11	10	10
....	3	....	3	....	1	....	2	3	2	4	2	2	1	5
1	1	6	2	2	2	1	3	4	2	....	....	3	1	2
177	167	146	123	111	138	177	172	163	212	220	234	223	202	228
25	42	45	35	47	46	62	54	60	47	34	57	53	100	169
....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
....	....	3	....	....	....	....	....	....	....	....	....	....	....	....
14	15	10	11	13	8	10	12	17	16	15	14	15	17	15
31	31	40	39	34	28	31	23	30	23	24	34	20	31	50
....	....	....	1	....	2	....	....	....	....	....	....	....	....	....
14	13	19	22	21	21	18	24	26	22	27	28	34	36	29
117	116	132	143	161	193	152	178	188	206	217	204	232	223	254
43	52	62	47	40	42	47	42	41	41	52	56	58	69	84

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1874.	1875.	1876.	1877.	1878.	1879.
III.	ORDER 3.						
	1. Epistaxis.....	.....	.....	.....	.....	2	2
	2. Laryngitis.....	3	4	3	2	.....	.....
	3. Bronchitis.....	40	58	57	73	81	67
	4. Pleurisy.....	10	10	9	5	8	13
	5. Pneumonia.....	250	400	339	226	317	311
	6. Asthma.....	10	10	7	8	8	13
	7. Lung Diseases, etc.....	36	13	14	8	15	12
	ORDER 4.						
	1. Gastritis.....	8	28	13	22	14	17
	2. Enteritis.....	37	29	36	39	40	34
	3. Peritonitis.....	20	28	24	17	22	24
	4. Ascites.....	.....	.....	.....	.....	.....	.....
	5. Ulceration of Intestines.....	.....	.....	.....	.....	.....	.....
	6. Hernia.....	6	1	7	5	7	12
	7. Ileus.....	1	.....	8	8	12	9
	8. Intussusception.....	.....	.....	.....	.....	3	2
	9. Stricture of Intestines.....	.....	1	.....	.....	.....	.....
	10. Fistula.....	.....	.....	.....	.....	.....	.....
	11. Stomach Diseases.....	33	13	10	7	13	13
	12. Pancreas Diseases.....	.....	.....	.....	.....	.....	.....
	13. Hepatitis.....	.....	.....	5	6	5	5
	14. Jaundice.....	4	4	1	7	4	3
	15. Liver Diseases, etc.....	36	43	39	39	40	44
	16. Spleen Diseases, etc.....	1	1	.....	2	1	.....
	17. Bowel Diseases, etc.....	26	11	5	1	4	2
	ORDER 5.						
	1. Nephritis (Bright's Disease, etc).....	42	40	38	46	54	61
	2. Ischuria.....	.....	.....	.....	.....	.....	.....
	3. Diabetes.....	5	11	5	9	4	15
	4. Calculus (Gravel, etc.).....	4	2	1	9	1	1
	5. Cystitis.....	.....	.....	.....	.....	.....	.....
	6. Prostate Disease.....	.....	3	4	2	4	4
	7. Kidney Diseases, etc.....	24	25	12	21	27	20
	8. Bladder Diseases, etc.....	10	4	9	11	2	12
	ORDER 6.						
	1. Ovarian Dropsy.....	.....	.....	.....	.....	.....	.....
	2. Uterine Diseases, etc.....	3	4	2	4	1	.....
	ORDER 7.						
	1. Arthritis.....	.....	.....	.....	.....	.....	.....
	2. Joint Diseases, etc.....	15	16	27	15	10	20
	ORDER 8.						
	1. Phlegmon.....	18	9	18	7	13	14
	2. Ulcer.....	3	3	3	2	2	.....
	3. Skin Diseases, etc.....	3	4	2	3	5	3
IV.	ORDER 1.						
	1. Still-born.....	277	246	224	242	248	216
	2. Infantile Debility, Premature Birth, etc.....	154	135	75	67	72	69
	3. Cyanosis.....	.....	.....	.....	.....	.....	.....
	4. Splna Bilida.....	.....	.....	.....	.....	.....	.....
	5. Other Malformations.....	17	15	11	26	32	19
	6. Teething.....	42	20	22	27	16	22
	ORDER 2.						
	1. Puerperia.....	.....	.....	.....	.....	.....	1
	2. Childbirth.....	44	35	30	29	26	35
	ORDER 3.						
	1. Old Age.....	223	216	241	213	222	220
	ORDER 4.						
	1. Atrophy and Debility.....	79	90	78	89	64	79

Causes of Deaths Registered in Rhode Island.

1890.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Total and Percentage for 35 Years, 1854-1888.	
.....	.....	.....	5	11	9	.....	1	2	.....	1	3	.00
8	6	7	5	11	9	9	8	7	6	5	136	.09
94	86	101	111	118	168	174	176	228	260	275	1,934	1.37
17	9	8	13	5	7	12	15	18	23	18	462	.33
364	327	314	400	363	465	481	488	508	483	569	8,899	6.30
11	16	9	14	10	21	15	20	18	16	23	274	.20
14	20	12	34	10	.....	5	13	11	17	18	352	.25
18	27	30	35	27	29	30	34	37	42	38	500	.35
33	44	75	47	76	64	85	43	88	78	63	1,228	.88
24	27	50	40	40	35	59	66	60	63	63	747	.53
.....	.....	.....	1	2	.....	2	.....	1	7	2	9	.....
.....	.....	.....	4	1	.....	1	5	3	1	.....	14	.01
8	10	11	7	11	10	15	13	11	10	16	204	.14
9	10	8	11	8	17	13	15	22	30	20	304	.21
.....	5	5	3	5	4	1	.....	3	2	2	44	.04
.....	.....	.....	1	.....	2	1	2	.....	1	1	13	.01
.....	.....	.....	.....	.....	.....	1	1	1	1	1	4	.....
10	12	14	16	16	22	29	34	24	33	35	432	.31
6	8	8	7	10	6	9	9	3	7	9	146	.10
3	3	8	6	5	9	2	12	12	11	15	143	.10
49	35	50	38	40	47	60	65	53	63	56	1,215	.87
.....	.....	.....	.....	2	.....	1	1	1	.....	.....	19	.01
9	6	6	20	7	8	10	10	10	7	14	245	.17
56	54	44	93	90	143	140	130	192	176	213	1,401	1.00
.....	.....	.....	2	.....	.....	.....	.....	.....	.....	1	8	.01
15	16	13	15	25	21	24	22	13	32	27	314	.22
.....	1	.....	1	.....	1	.....	1	1	5	2	60	.04
.....	.....	.....	8	7	12	23	17	10	18	36	95	.07
4	1	3	7	4	4	8	7	4	1	2	85	.07
35	25	44	36	39	25	24	39	21	34	16	684	.48
9	13	14	11	13	9	3	4	3	6	3	188	.13
.....	.....	.....	6	12	8	8	5	5	4	4	55	.04
7	3	6	20	2	6	4	9	5	6	4	115	.08
15	11	25	26	32	34	26	22	15	17	23	472	.34
5	17	14	18	18	21	13	15	19	7	13	358	.25
.....	3	2	1	4	.....	6	1	.....	.....	2	63	.04
2	3	1	.....	5	2	3	4	7	3	7	87	.07
192	264	253	253	272	271	293	276	295	329	296	7,262	5.15
93	92	101	137	128	132	157	211	230	195	225	2,843	2.02
3	.....	.....	17	5	6	11	10	16	11	14	73	.05
.....	.....	.....	.....	.....	.....	.....	.....	4	4	6	9	.00
13	26	21	19	22	15	15	18	16	15	19	531	.37
25	28	33	30	21	29	26	24	35	44	27	906	.70
36	38	22	42	35	26	31	28	33	27	26	911	.65
273	247	283	275	293	267	276	278	290	227	198	7,003	4.96
107	82	106	130	126	122	136	146	159	231	240	2,610	1.85

TABLE X.—Concluded.

Class.	CAUSES OF DEATH.	1854.	1855.	1856.	1857.	1858.
V.	ORDER 1.					
	(ACCIDENTS OR NEGLIGENCE.)					
	1. Fractures or Contusions ¹	1	...	4	...	...
	2. Burns and Scalds.....	9	14	12	7	6
	3. Drowning.....	15	18	13	20	24
	4. Falls.....	...	...	...	...	...
	5. Poison.....	3	6	4	3	5
	6. Suffocation and Strangulation.....	2	...	7	3	...
	7. Otherwise.....	23	19	16	40	38
	ORDER 2.					
	1. Battle.....	...	...	...	...	...
	ORDER 3.					
	1. Homicide.....	...	9	1	1	1
	ORDER 4.					
	1. Suicide.....	3	8	4	8	13
	Causes ill-defined.....	20	19	14	30	14
	Causes not stated.....	131	169	292	358	296

¹ Includes railroad accidents.

Causes of Deaths registered in Rhode Island.

1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
.....	.....	.....	.....	.....	.....	.....	12	8	8	6	9	12	15	16
13	24	21	14	10	12	16	18	16	16	15	12	12	12	14
24	32	29	29	21	26	20	27	23	20	24	30	24	29	36
.....	.....	.....	.....	.....	.....	.....	17	14	18	21	19	25	18	15
4	7	9	2	1	3	2	6	2	.....	4	2	4	1	5
1	1	3	3	1	1	1	.....	.....	.....	.....	.....	.....	.....	4
37	55	31	43	71	64	51	39	39	35	35	33	31	51	55
.....	...	.....	7	3	2	1	1	.....	.....	.....	.....	.....	.....	.....
1	4	3	1	5	2	.....	1	5	.....	2	5	.....	2	3
9	12	12	8	13	6	12	11	15	18	15	27	19	18	8
22	37	13	21	20	34	40	32	30	48	51	59	43	87	70
241	188	202	188	217	209	207	171	195	288	300	137	249	376	217

TABLE X.—Concluded.

Class.	CAUSES OF DEATH.	1874.	1875.	1876.	1877.	1878.	1879.
V.	ORDER 1. (ACCIDENTS OR NEGLIGENCE.)						
	1. Fractures or Contusions ¹	16	12	10	13	7	10
	2. Burns and Scalds.	23	17	12	18	11	13
	3. Drowning.	39	35	37	30	44	22
	4. Falls.	12	20	12	14	13	16
	5. Poison.	5	6	4	9	6	7
	6. Suffocation and Strangulation.	6	5	9	5	...	....
	7. Otherwise.	27	47	47	48	54	45
	ORDER 2.						
	1. Battle. ....	....	1	....	...	....	....
	ORDER 3.						
	1. Homicide.	4	3	4	3	3	1
	ORDER 4.						
	1. Suicide.	18	26	18	22	21	13
	Causes ill-defined.	57	56	32	56	49	48
	Causes not stated.	152	207	213	192	210	254

¹ Includes railroad accidents.

Causes of Deaths Registered in Rhode Island.

1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Total and Percentage for 35 Years, 1854-1888.	
18	20	16	16	16	15	20	47	33	48	57	360	.25
21	16	17	18	20	19	23	17	27	20	20	545	.38
33	29	40	27	41	42	58	39	46	52	71	1,046	.74
14	19	31	21	31	25	19	17	18	31	32	429	.13
5	9	7	10	8	9	6	7	12	7	11	183	.13
....	19	8	12	11	10	10	14	8	9	12	144	.10
55	43	59	53	70	58	58	65	46	49	47	1,581	1.13
....	....	....	....	....	....	....	....	....	....	...	14	.01
1	4	6	3	2	3	2	2	5	3	2	92	.06
10	23	31	25	22	20	17	16	21	24	19	542	.38
46	55	45	22	19	57	39	35	46	49	45	1,372	.98
233	347	271	186	42	59	51	19	28	39	43	6,995	4.95

TABLE XI.—OCCUPATIONS AND AGES OF DECEDENTS.

Showing the number and occupations of decedents for the year 1890, and for a period of thirty-six years and seven months, 1852 to 1888 inclusive. Ages under Twenty excluded.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
I.						
TILLERS OF THE SOIL.						
Farmers.....	162	11,191	69.07	5,169	342,238	66.21
Florists.....				19	889	47.16
Gardeners.....	13	697	53.38	179	10,710	59.83
Total.....	175	11,888	67.93	5,367	353,837	65.93
II.						
PROFESSIONAL AND PERSONAL.						
Actors.....				8	268	36.00
Architects.....	2	119	59.50	5	264	52.80
Artists.....	1	28	28.00	27	1,324	49.04
Assayers and Anal. Chem- ist.....				3	191	63.67
Authors.....				5	329	65.80
Civil Engineers.....	2	67	32.50	27	1,389	51.04
Clergymen.....	7	438	62.57	175	11,049	63.14
Dentists.....	4	245	61.25	18	925	51.40
Designers.....	1	62	62.00	9	491	54.56
Draughtsmen.....	2	44	22.00	6	227	37.83
Inspectors.....	2	80	40.00	1	56	56.00
Inventors.....				7	444	63.43
Journalists (Edit. and Report.).....	1	25	25.00	21	994	47.33
Judges and Justices.....				13	862	66.32
Lawyers.....	5	288	57.60	126	6,785	53.85
Lecturers.....				1	46	46.00
Musicians.....	3	176	58.67	43	1,967	45.73
Nurses.....				9	499	55.44
Photo. and Lithographers	2	118	59.00	17	736	43.29
Physicians.....	9	515	57.22	219	12,981	59.27
Professors and Teachers.	2	85	42.50	109	5,247	48.14
Public Officers.....	5	229	45.80	58	3,449	59.47

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Sheriffs, Constables and Policemen	4	259	64.75	76	4,306	56.66
Sculptors				1	53	53.00
Stenographers				1	29	29.00
Students	7	155	22.14	53	1,184	22.34
Telephone and Telegraph Operators.....	4	109	27.25	10	313	31.30
Veterinary Surgeons	1	67	67.00	1	33	33.00
Weighers, Guagers, etc..				5	345	69.00
Total.	64	3,109	48.44	1,054	56,786	53.87
III.						
OPTIONAL ACTIVITY.						
Agents and Canvassers, etc	17	822	48.35	130	6,985	53.73
Auctioneers				6	274	45.67
Bankers and Brokers....	7	361	51.59	89	5,319	59.76
Bank Officers.....	1	33	33.00	54	3,483	64.44
Bartenders.....	3	127	42.33	12	418	34.84
Booksellers.....				1	78	78.00
Bottlers.....				1	29	29.00
Butchers and Marketmen.	8	317	39.63	189	9,645	51.03
Carriage Dealers.....				1	55	55.00
Clothiers	1	66	66.00	7	433	61.86
Coal Dealers.....	1	58	58.00	1	25	25.00
Collectors.....	1	83	83.00	13	782	60.15
Commission Merchants..	2	86	43.00			
Contractors and Builders.	5	350	70.00	39	2,108	54.05
Dealers in Wool Waste..				1	56	56.00
Druggists and Apothecaries.....	2	64	32.00	55	2,526	45.93
Fish and Oyster Dealers.	4	236	59.25	1	58	58.00
Fruiters.....	1	56	56.00	1	30	30.00
Furniture Dealers.....	2	72	36.00			
Grain Dealers	1	63	63.00	1	44	44.00
Grocers.....	13	744	57.25	324	17,332	53.49
Hardware Dealers.....				1	52	52.00
Hotel and Innkeepers...	3	217	72.33	111	6,008	54.13
Ice-cream Makers	1	56	56.00	1	36	36.00

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Junk Dealers.....				7	386	55.14
Leather.....				1	35	35.00
Liquor.....	4	168	42.00	65	2,887	44.41
Lottery.....				1	31	31.00
Lumber.....	1	51	51.00	4	165	41.25
Mail-carriers.....				7	300	42.86
Manufacturers.....	26	1,808	69.54	422	24,428	59.28
Merchants.....	45	2,741	60.91	928	54,091	58.29
Opticians.....				2	141	70.50
Organ and Piano-tuners.....				3	207	69.00
Pork and Meat Cutters and Pork-packers. . .				6	271	45.17
Provision Dealers.....				2	114	57.00
Railroad Officials.....	4	137	34.25	61	2,753	45.13
Saloon and Restaurant Keepers.....	14	614	43.86	124	5,581	45.01
Ship-chandlers.....	1	48	48.00	3	194	64.67
Shoe Dealers.....				3	157	52.33
Stablekeepers.....	3	136	45.33	50	2,644	52.88
Tobacconists.....				7	414	59.14
Traders.....	3	197	65.67	274	13,750	50.18
Undertakers.....	2	86	43.00	24	1,406	58.58
Various and Unspecified Tradesmen.....	18	855	47.50	114	6,428	56.39
Total.....	194	10,653	54.89	3,137	172,158	54.88
IV.						
OUTDOOR.— <i>Local.</i>						
Boat-builders.....				22	1,311	59.59
Brickmakers.....				4	181	45.25
Brick and Stone Layers.....				5	260	52.00
Bridge-builders.....	1	71	71.00			
Calkers.....				8	594	74.25
Carpenters and Joiners..	68	4,174	61.38	1,392	75,094	53.95
Masons.....	37	2,238	60.49	577	32,359	56.07
Millwrights.....	2	121	60.50	25	1,581	63.24
Pavers.....				1	70	70.00
Riggers.....				21	1,167	55.57

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Roofers.....				1	27	27.00
Sash and Blind Makers..	1	70	70.00	8	374	44.25
Ship-carpenters.....	4	263	65.75	52	3,515	67.59
Slaters.....				6	245	40.83
Stonecutters and Marble- workers.....	14	664	47.43	157	7,892	50.27
Tanners and Curriers....	2	93	46.50	36	2,228	61.89
Wheelwrights.....	5	321	64.20	78	4,689	60.12
Total.....	134	8,015	59.81	2,393	131,587	59.17
V.						
INDOOR.—Active.						
Axe and Seythe Grinders.....				3	188	62.67
Bakers.....	6	303	50.50	95	5,158	54.21
Basket-makers.....				2	121	60.50
Bell-hangers.....				1	24	24.00
Belt-makers.....				7	411	58.71
Blacksmiths and Farriers.	30	1,644	54.80	462	24,635	53.31
Bleachers and Fullers... ..	2	87	43.50	48	2,404	50.08
Bobbin-makers.....				1	62	62.00
Boilermakers.....	5	210	42.00	48	1,806	37.63
Boltmakers.....	1	33	33.00	1	60	60.00
Bonnet-dressers.....				2	73	36.50
Brass-finishers.....	1	33	33.00	3	117	39.00
Brass and Iron Founders.	1	90	90.00	8	472	59.00
Brewers.....	1	65	65.00	11	525	47.72
Britannia-workers.....				1	65	65.00
Broom and Brush Makers.....				9	438	48.67
Cabinetmakers.....	5	289	57.80	105	6,135	58.43
Calico-printers.....				54	2,889	53.50
Cardmakers.....	1	50	50.00	3	151	50.33
CarriageMakersandTrim- mers.....	4	283	70.75	53	2,759	52.06
Carvers.....				3	147	49.00
Case-hardeners.....	1	71	71.00			
Chairmakers.....				1	70	70.00
Coffin-trimming Makers.	1	32	32.00			
Combmakers.....	2	69	34.50	3	118	39.33

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Confectioners	1	56	56.00	32	1,371	42.84
Cooks and Caterers	8	416	52.00	42	2,003	47.68
Coopers.	6	390	65.00	107	7,063	66.01
Coppersmiths. . . . .	.....	.....	.....	5	347	69.40
Cutters.	1	24	24.00	3	153	51.00
Distillers. . . . .	.....	.....	.....	1	77	77.00
Dyers.	3	166	55.33	82	4,162	50.76
Electroplaters	1	25	25.00	.....	.....	.....
Founders . . . . .	.....	.....	.....	10	381	38.10
Foundrymen. . . . .	.....	.....	.....	3	185	61.67
Furnacemen. . . . .	.....	.....	.....	3	130	43.33
Gasfitters.	2	84	42.00	37	1,588	42.93
Gilders.	1	40	40.00	7	279	39.43
Gold Refiners. . . . .	.....	.....	.....	3	153	51.00
Gun and Lock Smiths. . . . .	.....	.....	.....	21	1,129	53.76
Hatters . . . . .	.....	.....	.....	20	1,052	52.60
Heaters.	1	25	25.00	1	44	44.00
Iron Rollers and Workers	2	66	33.00	2	107	53.50
Jappers. . . . .	.....	.....	.....	17	47	47.00
Lathers. . . . .	.....	.....	.....	2	58	29.00
Linemakers. . . . .	.....	.....	.....	2	117	58.50
Machinists.	78	4,175	53.53	990	47,412	47.89
Mechanics.	15	932	62.13	402	21,229	52.81
Melters.	2	105	52.50	.....	.....	.....
Miners. . . . .	.....	.....	.....	9	465	51.67
Model-makers.	1	66	66.00	.....	.....	.....
Moulders	10	446	44.60	183	8,141	44.48
Nailcutters. . . . .	.....	.....	.....	11	422	38.35
Oil Refiners. . . . .	.....	.....	.....	1	76	76.00
Painters and Glaziers.	34	1,760	51.76	542	24,718	45.79
Paper-hangers.	2	92	46.00	11	576	52.36
Pattern-makers.	2	151	75.50	42	2,274	54.14
Pianoforte-makers . . . . .	.....	.....	.....	2	90	45.00
Picker-makers.	1	74	74.00	5	303	60.00
Plane-Makers . . . . .	.....	.....	.....	1	79	79.00
Plasterers and Stucco- workers.	2	84	42.00	28	1,395	49.96
Platers . . . . .	.....	.....	.....	1	76	76.00
Plumbers	5	211	42.20	48	1,908	39.75
Pump and Block Makers. . . . .	.....	.....	.....	14	788	55.71

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Reed-makers	1	76	76.00	1	60	60.00
Refiners				3	84	28.00
Scissors-grinders				1	70	70.00
Soapboilers	1	72	72.00	2	118	59.00
Spindle-makers				4	237	59.25
Stair-builders				3	153	51.00
Steam-pipers	1	27	27.00	1	56	56.00
Steel-polishers				1	42	42.00
Stone Manufacturers				7	416	59.43
Stopper-makers.				1	22	22.00
Stove-makers						
Sugar-refiners				7	311	44.43
Superintendents and Overseers	16	906	56.62	153	8,147	53.25
Tallow-chandlers				3	243	81.00
Tinsmiths	3	108	36.00	79	3,469	43.91
Tool-makers				9	393	45.66
Trunk-makers				3	89	29.67
Umbrella-makers				2	103	51.50
Upholsterers	1	35	35.00	31	1,115	35.96
Wire-workers	1	24	24.00	5	210	42.00
Wood-carvers				2	54	27.00
Wood finishers				2	84	42.00
Wood-turners	3	125	41.67	19	840	44.26
Total	266	12,557	47.21	3,937	195,542	49.67
VI.						
INDOOR.— <i>Activity Restricted.</i>						
Barbers	12	440	36.67	160	5,962	37.26
Block-cutters	1	23	23.00			
Bookbinders	1	44	44.00	17	774	45.53
Book-keepers and Accountants	18	817	45.11	284	12,521	44.08
Boxmakers	1	63	63.00	11	431	39.17
Braidmakers				1	66	66.00
Chainmakers				2	118	59.00
Chasers	2	79	39.50	1	45	45.00

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Cigarmakers	1	62	62.00	85	3,683	43.33
Clerks and Salesmen	57	2,116	37.12	681	23,576	34.62
Clock and Watch Makers.	1	59	59.00	21	1,075	51.18
Die-sinkers. ....	.....	.....	.....	17	766	45.18
Enamelers. ....	.....	.....	.....	2	128	64.00
Engravers.	4	214	53.50	96	4,496	46.83
File-cutters.	2	53	26.50	49	2,098	42.82
Finishers. ....	.....	.....	.....	3	140	46.67
Harnessmakers and Saddlers	5	236	47.20	85	4,002	47.08
Jewelers.	42	1,808	43.05	668	26,773	40.08
Lapidaries. ....	.....	.....	.....	7	225	32.14
Laundrymen. ....	.....	.....	.....	7	277	39.57
Leather-dressers. ....	.....	.....	.....	2	141	70.50
Millers.	1	81	81.00	36	2,102	58.39
Operatives.	113	5,233	46.31	1,556	67,149	43.15
Paper-makers.	1	40	40.00	3	218	72.67
Polishers.	2	126	53.00	6	312	52.00
Printers.	6	268	44.67	145	6,877	47.43
Roll-coverers. ....	.....	.....	.....	24	1,449	60.38
Rope-makers. ....	.....	.....	.....	24	1,596	66.04
Rubber-workers.	13	579	44.54	62	2,425	39.11
Sailmakers. ....	.....	.....	.....	30	1,768	58.93
Shoemakers.	19	1,062	55.90	554	26,250	57.82
Silversmiths.	13	536	41.23	75	3,337	44.49
Tailors.	15	851	56.73	301	16,182	53.76
Wool-sorters.	5	228	45.60	16	721	45.06
Total.	335	15,018	44.83	4,931	217,673	44.14
VII.						
OCCUPATIONS AT LARGE.						
Army Officers. ....	.....	.....	.....	1	58	58.00
Baggage Masters. ....	.....	.....	.....	3	88	29.33
Boatmen. ....	.....	.....	.....	17	1,029	60.53
Brakemen.	8	220	27.50	50	1,404	28.08
Car Drivers and Conductors. ....	.....	.....	.....	8	275	34.38
Coachmen.	9	372	41.33	122	5,224	42.82

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Drivers	2	58	29.00	1	73	73.00
Drovers .....	.....	.....	.....	2	83	41.50
Engineers and Firemen ..	18	912	50.67	218	10,084	46.26
Expressmen	3	196	65.33	62	2,971	47.92
Fire-company Members ..	.....	.....	.....	1	31	31.00
Fishermen and Oystermen	7	323	46.14	174	8,496	48.79
Horse-trainers	1	50	50.00	.....	.....	.....
House-movers .....	.....	.....	.....	4	284	71.00
Lumbermen .....	.....	.....	.....	1	87	87.00
Mariners	4	296	74.00	498	24,353	48.90
Messengers .....	.....	.....	.....	1	29	29.00
Naval Officers .....	.....	.....	.....	14	674	48.14
Peddlers	8	479	59.88	111	5,484	49.41
Pilots	1	22	22.00	13	739	56.84
Sailors	12	501	41.75	183	8,905	48.66
Sea Captains (Ship Mas- ters)	10	654	65.40	112	7,332	65.45
Soldiers .....	.....	.....	.....	135	4,041	29.92
Stage-drivers	1	65	65.00	6	262	43.67
Teamsters	14	700	50.00	345	16,127	46.74
Total	98	4,847	49.46	2,083	98,193	47.14
VIII.						
NO SPECIAL EMPLOY- MENT.						
Billposters	1	59	59.00	1	59	59.00
Cabdrivers and Hackmen.	3	164	54.67	27	1,153	42.70
Clandiggers	1	58	58.00	.....	.....	.....
Gasworkers	1	33	33.00	.....	.....	.....
Gentlemen .....	.....	.....	.....	39	2,580	66.15
Hostlers	5	256	53.20	70	2,889	41.26
Ice-men .....	.....	.....	.....	4	265	66.25
Janitors	2	99	44.50	39	1,987	50.96
Laborers	349	17,699	50.71	6,593	323,340	49.04
Lamplighters .....	.....	.....	.....	7	355	50.71
Lighthouse-keepers .....	.....	.....	.....	2	111	55.50
Linemen	1	29	29.00	.....	.....	.....
Milkmen	1	26	26.00	5	179	35.80

TABLE XI — OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months. June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Porters	3	125	41.67	.....	.....	.....
Poultry-pickers.	1	69	69.00	29	1,402	48.34
Servants	2	100	50.00	17	749	44.06
Sextons	1	75	75.00	3	170	56.67
Stewards	1	38	38.00	13	618	47.54
Stewards	2	90	45.00	7	247	35.29
Stove-mounters	1	33	33.00	2	108	54.00
Waiters	4	175	43.75	84	3,521	41.95
Watchmen	7	432	61.71	102	5,477	53.60
Well-diggers .....	.....	.....	.....	4	295	73.75
Whitewashers .....	.....	.....	.....	3	173	57.67
Wood-sawyers .....	.....	.....	.....	2	105	52.50
Total	386	19,560	50.67	7,053	345,783	49.03
IX.						
EMPLOYMENTS OF WOMEN						
Actresses .....	.....	.....	.....	1	24	24.00
Agents .....	.....	.....	.....	1	59	59.00
Artists .....	.....	.....	.....	2	137	68.50
Basket-makers .....	.....	.....	.....	2	149	74.50
Boardinghouse-keeper ..	.....	.....	.....	19	1,231	64.79
Bookbinders .....	.....	.....	.....	1	43	43.00
Bookkeepers .....	.....	.....	.....	2	69	34.50
Boxmakers	1	30	30.00	4	120	30.00
Capmakers .....	.....	.....	.....	1	28	28.00
Chainmakers .....	.....	.....	.....	1	33	33.00
Cigar-makers .....	.....	.....	.....	5	140	28.00
Clerks and Saleswomen ..	.....	.....	.....	7	249	35.56
Cooks	3	148	49.33	14	785	56.07
Dressmakers and Seam- stresses	13	557	42.84	225	9,967	44.30
Farming .....	.....	.....	.....	1	89	89.00
Hairdressers .....	.....	.....	.....	1	25	25.00
Harnessmakers .....	.....	.....	.....	1	52	52.00
Housekeepers	210	11,340	54.00	1,403	79,178	56.43
Housewives	43	2,108	49.02	13	713	54.85
Jewelers	1	20	20.00	7	183	26.14
Laboring	10	453	45.80	3	128	42.67

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Laundresses.....	1	61	61.00	22	1,086	49.36
Midwives.....	1	67	67.00	1	61	61.00
Milliners.....	.....	.....	.....	44	1,471	33.43
Musicians.....	1	42	42.00	1	31	31.00
Nurses.....	3	171	57.00	72	4,463	61.99
Operatives.....	59	1,773	30.00	584	18,557	31.76
Physicians.....	.....	.....	.....	8	455	56.88
Public Officers.....	.....	.....	.....	1	65	65.00
Rubber-workers.....	2	68	34.00	5	139	27.80
Servants and Domestics..	25	1,444	57.76	328	15,395	46.92
Shopkeepers.....	.....	.....	.....	3	137	45.67
Sisters of Mercy.....	.....	.....	.....	22	820	37.37
Stewardesses.....	.....	.....	.....	1	38	38.00
Superintendents.....	.....	.....	.....	2	126	63.00
Tailoresses.....	.....	.....	.....	126	5,798	46.02
Teachers.....	1	21	21.00	153	6,562	42.89
Telegraph and Telephone Operators.....	.....	.....	.....	1	54	54.00
Upholsterers.....	.....	.....	.....	1	34	34.00
Waitresses.....	.....	.....	.....	3	106	35.33
Total.....	374	18,308	48.95	3,093	148,857	48.12

TABLE XI.—OCCUPATIONS.—RECAPITULATION.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1890.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
I.						
TILLERS OF THE SOIL...	175	11,888	67.93	5,367	353,837	65.93
II.						
PROFESSIONAL AND PERSONAL.....	64	3,109	48.44	1,054	56,786	53.87
III.						
OPTIONAL ACTIVITY	194	10,653	54.89	3,137	172,158	54.88
IV.						
OUTDOOR.— <i>Local</i>	134	8,015	59.81	2,393	131,587	59.17
V.						
INDOOR.— <i>Active</i>	266	12,557	47.21	3,937	195,542	49.67
VI.						
INDOOR.— <i>Activity Restricted</i>	335	15,018	44.83	4,931	217,673	44.14
VII.						
OCCUPATIONS AT LARGE.	98	4,847	49.46	2,083	98,193	47.14
VIII.						
NO SPECIAL EMPLOYMENTS.....	386	19,560	50.67	7,053	345,783	49.03
IX.						
EMPLOYMENTS OF WOMEN	374	18,308	48.95	3,093	148,857	48.12
ALL CLASSES.....	2,026	103,955	51.31	33,048	1,720,416	52.05

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1890.

Ages under twenty excluded.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Influenza.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.	
I.																																			
TILLERS OF THE SOIL.																																			
Farmers.....	156	7	2	17	..	7	1	3	5	9	14	5	2	4	4	1	..	1	..	1	28	2	2	5	3	17	..	..	1	..	..	2	1	..
Gardeners.....	13	1	..	3	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	..	..	..	1	..	1	..	..
Total.....	169	8	2	20	..	7	1	3	6	9	15	5	2	4	4	1	..	1	..	1	28	3	2	6	3	17	1	..	1	1	..	3	1	..	
II.																																			
PROFESSIONAL AND PERSONAL.																																			
Architects.....	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Artists.....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Civil Engineers.....	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Clergymen.....	7	..	..	..	..	..	1	..	1	1	..	1	1	..	..	..	..	..	..	..	..	1	1	1	1	1	..	..	1	..	..	1	..	..
Dentists.....	4	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Designers.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Draughtsmen.....	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

[illegible]

OCCUPATIONS.

Stonecutters and Marble-

workers.

Tanners and Curriers.

Wheelwrights

Total.

V.

INDOOR.—Active.

Bakers.

Blacksmiths and Farriers ...

Bleachers.

Boilermakers.

Boilermakers.

Boltmakers.

Brass-finishers.

Brass Founders.

Brewers.

Cabinetmakers.

Cardmakers.

Carriage Makers and Trim-

mers.

Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Influenza.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicemia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.
14	..	2	1	..	..	..	..	..	1	3	1	..	..	..	..	1	..	1	1	..	1	1	..	..	..	1	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
5	..	2	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
129	5	14	2	1	2	2	2	3	6	16	9	..	1	..	2	2	..	1	17	3	1	2	9	6	1	1	1	1	1	2	1	1
5	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..
30	2	1	1	1	1	1	1	1	3	6	2	..	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1
2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
5	2	..	..	..	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	..	..	..	..	1	1	1	1	..	1	..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1890.—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Influenza.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.
Bookbinders.....	1																						1											
Book-keepers and Accountants.....	17		2								5						1				2		2	2	1									
Boxmakers.....	1						1																											
Chasers.....	2																			1			1											
Cigarmakers.....	1										1																							
Clerks and Salesmen.....	55	4	1			1	1	1	1	1	24	1								2	3	3	1	6	1	1	3				1	2		
Clock and Watch Makers.....	1																																	
Engravers.....	4	1	1																	1			1											
File-cutters.....	2																		1															
Harnessmakers and Saddlers.....	4										1														2									
Jewelers.....	41	1	1	2	1		2			1	16			1					1		2	1	2	1		1	4							2
Millers.....	1						1																											
Operatives.....	107	8	2	6	2	1	2	3	5		26	4	1		1	1	1		1	4	10	4	1	3	1	3		3	5	5		1	1	2
Paper-makers.....	1										1																							
Polishers.....	2								1																									
Printers.....	6										5																							
Rubber-workers.....	13									1	7									1	1	1	1											
Shoemakers.....	18	1	1	5		1					2									1	3			2	1									

OCCUPATIONS.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhoea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Malarial.	Fever, Typhoid, etc.	Heart Diseases.	Influenza.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.				
Silversmiths....	13	1	3								9									1		1		1															
Tailors	14		1				1	1	1		2	1			2						1		2											1					
Wool-sorters.....	5	1									2													1															
Total.....	321	17	5	21	3	3	3	9	7	3	103	7	1	1	3	1	2		2	12	23	12	5	21	6	6	5	3	18	8	1	1	4	5					
VII.																																							
OCCUPATIONS AT LARGE.																																							
Brakemen.....	8	9																		1		1																	
Coachmen.....	9	2						1			3			1			1				1																		
Drivers.....	1										1																												
Engineers and Firemen....	16	1	2				1	2						2					1	1	1		1		1	1	1		3										
Expressmen ..	3									1					1				1																				
Fishermen and Oystermen	7	2				1	1			1	1			1																									
Horse-trainers	1										1																												
Mariners.....	4		2																	2		2																	
Peddlers.....	8		1	2										1									1		1														
Pilots.....	1																																						
Sailors.....	11	3	1																2	1							1				1				2				
Sea Captains.....	9	2							1		2										2	1					1												

TABLE XII Continued.—OCCUPATIONS AND CAUSES OF DEATH, 1890.—RECAPITULATION BY CLASSES.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Malarial.	Fever, Typhoid, etc.	Heart Diseases.	Influenza.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.		
I.																																					
TILLERS OF THE SOIL.....	169	8	2	20	..	7	1	3	6	9	15	5	2	4	4	1	..	1	..	1	28	3	2	6	3	17	1	..	14	1	1	..	3	1	..	1	..
II.																																					
PROFESSIONAL SERVICES...	63	3	..	2	..	1	1	4	3	2	13	3	1	2	2	5	2	1	3	..	2	1	..	9	1	1	..	1	1	..
III.																																					
OPTIONAL ACTIVITY	189	14	2	17	1	6	2	5	4	6	26	5	3	3	1	2	1	3	2	6	23	9	..	16	4	6	..	1	17	..	2	..	1	..	1	..	1
IV.																																					
OUTDOOR.—Local.....	129	5	..	14	2	1	..	2	3	6	16	9	..	1	..	2	..	2	..	1	17	3	1	7	6	6	1	1	17	1	1	..	2	1	1	1	
V.																																					
INDOOR.—Active.....	259	16	5	19	1	2	2	8	8	12	56	4	..	2	3	4	..	..	2	7	30	7	3	15	6	5	2	3	23	5	..	..	4	1	4	4

TABLE XII Concluded.—OCCUPATIONS AND CAUSES OF DEATH, 1890.—RECAPITULATION BY CLASSES.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Influenza.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.	
VI.																																			
INDOOR. — <i>Activity Restricted</i>	321	17	5	21	3	3	3	9	7	3	103	7	1	1	3	1	2	2	2	12	23	12	5	21	6	6	5	3	18	8	1	1	4	5	
VII.																																			
OCCUPATIONS AT LARGE.	92	16	2	9	1	3	3	1	3	1	11	1	1	6	2	1	1	2	2	3	7	3	3	3	3	3	1	8	1	1	1	1	2		
VIII.																																			
NO SPECIAL TRADES...	371	36	2	25	1	7	2	14	5	73	11	2	3	3	1	6	3	3	4	12	35	6	3	22	7	12	4	5	52	4	1	4	3	4	
IX.																																			
WOMEN.....	345	5	3	22	3	1	2	4	16	17	71	19	2	7	8	7	1	1	6	10	26	14	2	18	6	16	8	1	36	4	1	8	1	2	
ALL CLASSES.....	1938	120	21	149	11	29	14	40	62	63	384	64	11	29	22	23	7	9	18	54	194	59	17	111	38	73	23	14	194	23	5	2	24	12	19

RESULTS AND OBSERVATIONS.

GENERAL SUMMARY.

The number of births registered in the State of Rhode Island, during the year 1890, was eight thousand five hundred and fifty (8,550); the number of marriages, three thousand one hundred and ninety-five (3,195); and the number of deaths, six thousand nine hundred and thirty-four (6,934).

TABLE XIII.

General Results of Registration for ten years, and for each of the last twenty-seven years.

Years.	Whole Number of Births.	Still-born.	Living Births.	Marriages.	Deaths.
1854-1863.....	38,042	1,471	36,571	14,943	24,230
1864.....	3,892	138	3,754	1,844	3,360
1865.....	3,955	177	3,778	1,896	3,405
1866.....	4,902	172	4,730	2,318	2,970
1867.....	5,127	163	4,964	2,344	2,880
1868.....	5,272	212	5,160	2,285	2,912
1869.....	5,215	220	5,025	2,289	3,382
1870.....	5,215	234	4,981	2,362	3,238
1871.....	5,678	223	5,455	2,336	3,344
1872.....	6,143	202	5,941	2,537	4,247
1873.....	6,022	228	5,794	2,630	4,403
1874.....	6,466	277	6,189	2,541	4,229
1875.....	6,508	246	6,262	2,485	4,317
1876.....	6,329	224	6,105	2,253	4,116
1877.....	6,235	212	5,993	2,282	4,450
1878.....	6,714	218	6,466	2,324	4,441
1879.....	6,350	216	6,134	2,396	4,472
1880.....	6,295	192	6,103	2,769	4,829
1881.....	6,761	264	6,497	2,750	5,016
1882.....	6,825	253	6,572	2,634	5,074
1883.....	7,046	253	6,793	2,611	5,282
1884.....	7,305	272	7,033	2,558	5,141
1885.....	7,028	271	6,757	2,488	5,389
1886.....	7,621	293	7,328	2,750	5,849
1887.....	7,668	276	7,392	2,839	6,340
1888.....	7,840	295	7,545	3,022	6,594
1889.....	8,220	329	7,891	3,029	6,259
1890.....	8,559	296	8,254	3,195	6,934

During the period of thirty-seven years there were recorded, in Rhode Island, 209,354 births, of which number 8,312 were still-born, and 201,042 were living children.

During the same period there were recorded 82,709 marriages, or 165,418 persons married, and 147,112 deaths.

These results show that in every 25.1 births there was one still-born child, or that in every 1,000 births there were about 40 still-born and 960 living children.

The same results also show that the ratio of whole number of living births to the whole number of persons married, and to the whole number of decedents respectively, during the same period, were as follows:

	Of persons married,	Of deaths,
For every 100 living births there were	82.3 and.....	73.2

The number of births in excess of the previous year was 330 ; the number of marriages 166 larger, or 332 more persons married ; and an increase of 675 deaths. It will be observed the increase of deaths was more than twice as large as the increase of births and of persons married.

In 1890,

	Of persons married,	Of deaths,
For every 100 living births there were	77.4	83.8

TABLE XIV.

Comparative Exhibit of Births, Marriages and Deaths in each Town in Rhode Island, in each of the Six Years 1885—1890, and Excess of Births over the Deaths in 1890.

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS.					MARRIAGES.					DEATHS.					EXCESS OF BIRTHS OVER DEATHS, 1890.			
	1886.		1887.		1888.	1889.		1890.		1885.	1886.		1887.		1888.		1889.	1890.	
	1885.	1886.	1887.	1888.		1889.	1890.	1885.	1886.		1887.	1888.	1889.	1890.					
Barrington	27	29	18	27	25	32	7	5	6	12	5	16	17	29	20	20	21	25	7
Bristol	111	123	116	100	104	89	32	40	36	23	37	51	98	116	119	127	86	115	-26
Warren	71	90	94	87	102	105	30	34	33	39	33	42	70	78	104	101	113	8	
Bristol County	209	242	228	214	231	226	69	79	75	74	75	109	185	223	217	251	298	253	27
Coventry.	72	108	95	103	104	104	31	39	22	33	23	32	72	76	67	81	100	88	16
East Greenwich	71	47	71	73	68	71	26	32	31	26	37	41	72	49	41	69	58	67	4
West Greenwich.	23	14	22	20	10	20	2	2	5	4	5	.....	12	11	9	14	18	16	4
Warwick	286	336	322	362	421	441	109	114	127	126	159	157	199	218	223	211	281	299	145
Kent County.	452	505	510	558	606	639	168	187	185	189	221	230	355	387	313	408	457	470	169
James town.	9	9	6	2	5	3	.....	1	4	3	5	1	8	4	11	8	4	4	-1
Little Compton.	15	16	7	4	20	5	15	4	9	5	11	9	16	22	14	13	8	22	-17
Middletown.	14	29	23	29	25	29	12	3	6	5	5	3	17	21	15	22	17	9	20
Newport City.	529	600	632	599	712	665	147	134	123	125	135	180	267	309	313	319	323	348	317
New Shoreham.	25	36	34	16	28	28	6	13	13	14	7	12	28	16	22	21	20	19	9
Portsmouth	27	21	25	23	17	30	7	14	9	10	11	9	32	25	17	24	20	21	-1
Tiverton.	68	55	79	63	79	68	13	16	11	22	16	18	43	41	49	51	50	49	19
Newport County.	687	766	807	736	886	818	185	190	175	184	190	232	411	438	411	458	412	472	316

The varying numbers of the events of births, marriages and deaths occurring in the different towns during each of the six years ending December 31, 1890, are very concisely presented in Table XIV, and a ready means is thereby afforded of comparing and studying the vital movements of the people in the different precincts.

It will doubtless be a surprise to the reader to learn that the natural increase, by births, of the population in Rhode Island, during 1890, was the small number of 1,616, and can hardly be a matter of much satisfaction to the enterprising and patriotic citizen, especially as 296 of the births were still-born.

TABLE XV.

Births, Marriages and Deaths in Rhode Island, in 1890, with the number and ratio of each in every 1,000 of the Population of each Town, and the excess of the Births over the Deaths in every 1,000 of the Population.

TOWNS AND DIVISIONS OF THE STATE.	Population.	Births.	Births per 1,000 of Population.	Marriages.	Persons Married pr 1,000 of Popula- tion.	Deaths.	Deaths per 1,000 of Population.	Excess of Births over Deaths, per 1,000.
Barrington	1,461	32	21.9	16	21.9	25	17.1	4.8
Bristol	5,478	89	16.2	51	18.6	115	20.9	-4.7
Warren	4,489	105	23.4	42	18.7	113	25.2	-1.8
BRISTOL COUNTY	11,428	226	19.8	109	19.1	253	22.1	-2.3
Coventry	5,068	104	20.5	32	12.6	88	17.4	3.1
East Greenwich	3,127	71	22.7	41	26.2	67	21.4	1.3
West Greenwich	798	20	25.1	...	...	16	20.1	5.0
Warwick	17,761	444	25.0	157	17.7	299	16.9	8.1
KENT COUNTY	26,754	639	23.8	230	17.2	470	17.6	6.2
Jamestown	707	3	4.2	1	2.8	4	5.7	-1.5
Little Compton	1,128	5	4.4	9	16.0	22	19.5	-15.1
Middletown	1,154	29	25.1	3	5.2	9	7.8	17.3
NEWPORT CITY	19,457	665	34.2	180	18.5	348	17.9	16.3
New Shoreham	1,320	28	21.2	12	18.2	19	14.4	6.8
Potsmouth	1,949	20	10.3	9	9.2	21	10.8	-0.5
Tiverton	2,837	68	24.0	18	12.7	49	17.2	6.8
NEWPORT COUNTY	28,552	818	28.6	232	16.3	472	16.5	12.1
Burrillville	5,492	86	15.7	34	12.4	106	19.1	-3.4
Cranston	6,399	152	23.8	61	19.1	120	18.8	5.0
Cumberland	8,090	198	24.5	81	20.0	159	19.6	5.1
East Providence	8,422	168	19.9	66	15.7	131	15.6	4.3
Foster	1,252	16	12.8	8	12.8	17	13.6	-0.8
Glocester	2,095	44	21.0	8	7.6	46	22.0	-1.0
Johnston	9,778	245	25.1	59	12.1	156	16.0	9.1
Lincoln	20,355	658	32.3	145	14.2	462	22.2	10.1
North Providence	2,084	46	22.7	4	3.8	43	20.6	1.1
North Smithfield	3,173	65	20.5	22	13.9	29	9.1	11.4
PAWTUCKET	27,633	697	25.2	262	19.0	606	21.9	3.3
PROVIDENCE CITY	132,146	3,416	25.9	1,408	21.3	2,876	21.7	4.2
Scituate	3,174	81	25.5	44	27.8	48	15.1	10.4
Smith field	2,500	45	18.0	8	6.4	45	18.0	...
WOONSOCKET	20,830	579	27.4	201	19.3	428	20.5	6.9
PROVIDENCE COUNTY	238,123	6,486	27.2	2,411	20.3	5,272	22.1	5.1
Charlestown	915	11	12.0	5	10.9	11	12.0	...
Exeter	964	14	14.5	12	21.9	13	13.5	1.0
Hopkinton	2,864	53	18.5	27	18.9	36	12.6	5.9
Narragansett	1,408	22	15.6	4	5.7	17	12.1	3.5
North Kingstown	4,153	61	14.6	31	14.8	51	12.2	2.4
South Kingstown	4,823	79	16.4	57	23.6	60	12.1	4.0
Richmond	1,669	35	20.9	8	9.6	31	18.6	2.3
Westerly	6,814	106	15.6	69	20.3	99	14.5	1.1
WASHINGTON COUNTY	23,649	381	16.1	213	17.1	318	13.5	2.6
STATE INSTITUTIONS	1,700	...	...	...	...	149	87.6	...
WHOLE STATE	345,506	8,550	24.7	3,195	18.5	6,934	20.1	4.6

BIRTHS. *Proportion to Population.*

As in previous years, the varying proportions of the number of births, marriages and deaths to every 1,000 of the population in the various towns and cities will be found, in Table XV, to have occurred in like manner in 1890.

In regard to births, the extreme range of proportion to population was from 4.2 in every 1,000, in Jamestown, to 34.2 in the city of Newport. Following Newport, in the line of largest proportion, are Lincoln, with 32.3, and Woonsocket, with 27.4. Following Jamestown, in the line of the smallest proportion of births to population, are Portsmouth, with 10.3 in every 1,000, and Little Compton 4.4.

The proportions of births to population in all the counties entire, and in the cities of Providence, Pawtucket, Newport, Woonsocket, and the whole State, during the last seven years, are as follows:

BIRTHS TO EVERY 1,000 PERSONS.

	1890.	1889.	1888.	1887.	1886.	1885.	1884.
Bristol County.....	19.8	19.6	18.1	19.6	20.9	18.4	22.9
Kent County.....	23.8	26.6	24.6	23.0	22.8	20.9	23.3
Newport County.....	28.6	29.4	24.4	20.0*	18.9*	18.1*	*19.0
Newport City....	34.2	33.5	28.2	30.9	29.3	27.0	29.2
Providence County.....	27.2	24.8	21.9	25.0†	27.2†	22.9†	†23.8
Pawtucket City.....	25.2	25.7	25.0	25.0	22.5	23.1	24.3
Providence City.....	25.9	24.9	24.4	21.3	24.7	24.8	25.1
Woonsocket.....	27.4	26.2	26.8	23.5	27.5		
Washington County..	16.1	18.3	16.9	20.4	20.3	18.8	18.5
Whole State.....	24.7	24.1	24.2	24.2	24.5	23.1	24.0

PERSONS MARRIED. *Proportion to Population.*

The proportion to the population, of persons married, can be more correctly shown in counties, or in cities and aggregates of towns, rather than in single towns.

The following summary will present the proportions in the manner suggested, for the last six years:

* Newport county towns.

† Providence county towns.

PERSONS MARRIED IN EVERY 1,000.

	1890.	1889.	1888.	1887.	1886.	1885.
Bristol County.....	19.1	12.7	12.5	12.8	13.6	12.2
Kent County.....	17.2	19.7	16.7	16.8	16.9	15.5
Newport County.....	16.3	12.6	12.2	11.8 ¹	11.6 ¹	9.9 ¹
Newport City.....	18.5	12.7	11.7	12.0	13.1	15.0
Providence County.....	20.3	19.3	19.8	15.4 ¹	15.9 ¹	15.6 ¹
Pawtucket.....	19.0	21.8	23.5	24.6	20.0	22.3
Providence City.....	21.3	21.4	21.6	21.0	20.8	18.5
Woonsocket.....	19.3	19.1	17.4	17.2	16.1	.....
Washington County.....	17.1	14.9	18.7	16.6	15.9	15.1
Whole State.....	18.5	18.4	18.7	18.0	17.7	16.3

DEATHS. *Proportion to Population.*

The death-rates, during 1890, varied in the different localities, as in preceding years.

The highest rate occurred in Warren, that is, 25.2 in every 1,000 of the population; followed by Lincoln with 22.2 and Gloucester with 22.0.

Several of the county towns had larger death-rates than either of the cities.

The lowest death-rate was in the town of Jamestown, that is, 5.7 in every 1,000 of the population, followed by Middletown with 7.8, and North Smithfield with 9.1.

The following summary will give the ratios of mortality to the population in the cities and counties of the State, during the six years ending December 31, 1890:

DEATHS IN EVERY 1,000 OF POPULATION.

	1890.	1889.	1888.	1887.	1886.	1885.
Bristol County.....	22.1	17.6	21.3	18.2	19.2	16.3
Kent County.....	17.6	20.1	18.4	15.5	17.5	16.4
City of Newport.....	17.9	15.2	15.0	15.3	15.1	13.6
Newport County.....	16.5	14.7	18.0	15.2	15.0	14.5
Pawtucket.....	21.9	20.5	21.8	22.3	19.0	19.0
City of Providence.....	21.7	19.7	21.0	21.6	19.6	18.3
Woonsocket.....	20.5	19.8	22.1	23.4	19.5	.....
Providence County.....	22.1	19.2	21.0	21.0	19.2	18.3
Washington County.....	13.5	14.6	16.0	15.5	15.0	14.1
Whole State.....	20.7	19.0	20.4	19.9	18.8	17.7

It will be noticed that the ratio of mortality to living persons was larger, in every locality and section, in 1890, than the general average of the previous five years, excepting in Kent county, which was the same, and in Washington county and Woonsocket.

¹ County towns.

TABLE XVI.

Proportions of Births, Marriages and Deaths to the Population, in the whole State, in each of the last twenty-two years.

YEARS.	BIRTHS.		MARRIAGES.		DEATHS.		
	Number.	Of population one birth in every	Number.	Of population one person married in every	Number.	Of population one death in every	Deaths in every 1,000 of the population.
1869.	5,245	41.4	2,289	47.5	3,382	64.2	15.6
1870.	5,215	41.7	2,362	46.0	3,238	67.1	14.9
1871.	5,678	38.2	2,335	46.5	3,444	65.0	15.4
1872.	6,143	35.4	2,537	42.9	4,247	51.2	19.5
1873.	6,022	36.1	2,630	41.3	4,403	49.4	20.3
1874.	6,466	39.9	2,541	50.8	4,229	61.1	16.4
1875.	6,508	39.7	2,485	52.0	4,317	59.8	16.7
1876.	6,329	40.8	2,253	57.3	4,116	62.7	15.9
1877.	6,235	41.4	2,282	56.6	4,450	58.0	17.2
1878.	6,714	38.5	2,324	55.7	4,441	58.1	17.2
1879.	6,350	43.6	2,396	57.8	4,472	61.9	16.0
1880.	6,295	43.9	2,769	49.9	4,829	57.3	17.5
1881.	6,761	40.9	2,750	50.3	5,016	55.1	18.1
1882.	6,825	40.5	2,694	52.5	5,074	54.5	18.3
1883.	7,046	39.2	2,611	52.9	5,282	52.4	19.1
1884.	7,305	41.7	2,553	59.4	5,141	59.2	16.1
1885.	7,028	43.3	2,488	61.3	5,389	56.4	17.7
1886.	7,621	40.8	2,750	56.5	5,818	53.2	18.8
1887.	7,668	41.3	2,839	55.8	6,340	50.0	19.9
1888.	7,840	41.1	3,022	53.5	6,594	50.0	20.4
1889.	8,220	40.9	3,029	55.4	6,259	52.6	19.0
1890.	8,550	40.8	3,195	54.0	6,934	49.8	20.7

It may be of interest to note the changes in the vital movements of the people during the last twenty-two years, that is, the slightly lessened birth-rate, the more largely lessened marriage-rate, and the increased death-rate.

The complete return and registration of the deaths, during the past ten years, will account in part for the increased death-rate.

During the first five of the twenty-two years, the proportion of the births was an average of one to every 38.3 of the population, or 26.1 in every 1,000.

During the last five the proportion was an average of one birth to every 41.0 of the population, or 24.4 in every 1,000.

The marriage-rate for the first five years, was an average of one person married in every 44.8 of the population, or 22.3 in every 1,000.

During the last five years the proportion was an average of one person married in every 55.0 of the population, or 18.2 in every 1,000.

The death-rate for the first five years, was an average of one death in every 59.4 of the population, or a proportion of 16.8 deaths in every 1,000.

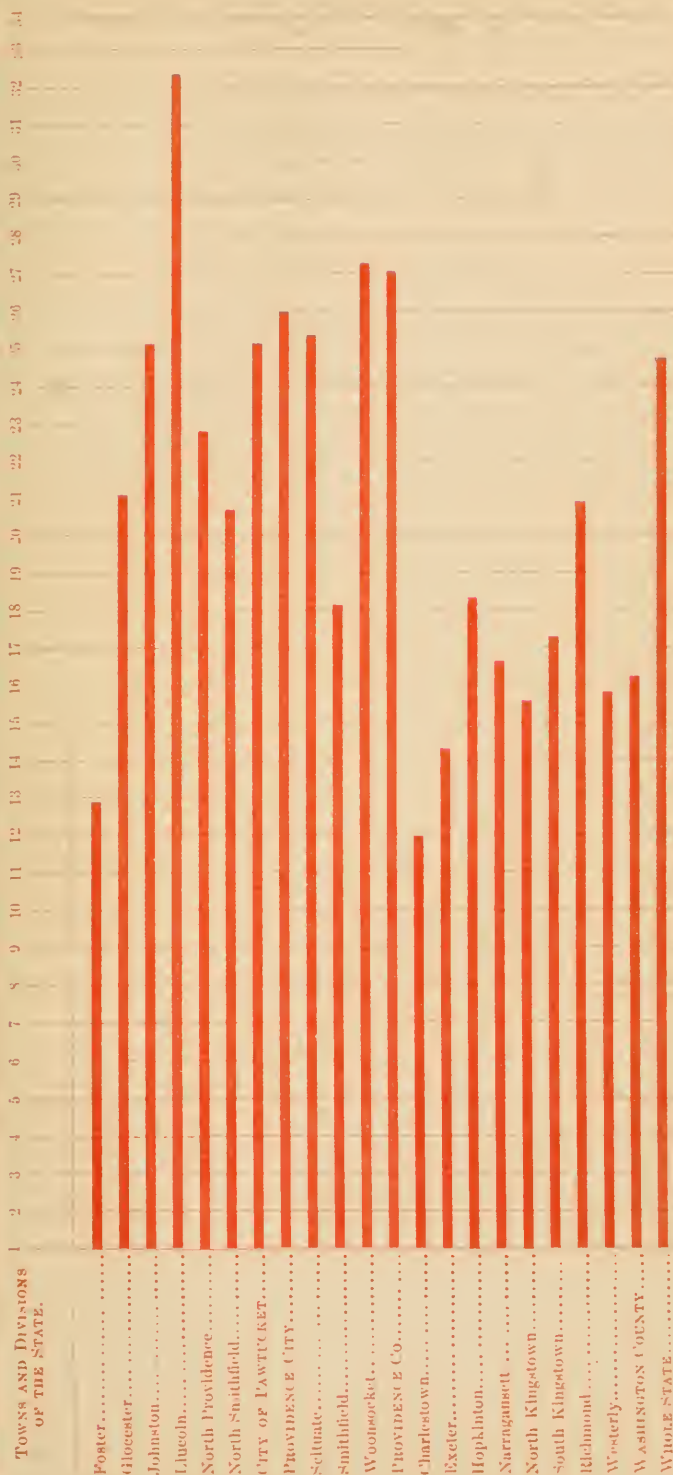
During the last five years the proportion was an average of one death in every 51.1 of the population, or 19.6 in every 1,000.

BIRTH RATES.

Diagram I.—Showing the number of births in every 1000 of the population, in each town and each county in the State during the year 1890, computed upon the population by the Census of 1890.

For explanation see foot note on next page.





The figures at the top of the perpendicular lines indicate, in whole numbers, the number of births during the year in every 1000 persons. The spaces are fractional parts of one. For instance, the heavy horizontal line against Barrington, at the top of this diagram, reaches across about nine tenths of the space between the perpendicular lines 21 and 22. It shows the birth rate of Barrington, in 1890, was about twenty-one and nine-tenths in every 1000 of the population.

BIRTHS, 1890.

The general statistics of births in Rhode Island, during the year 1890, derived from the returns sent to this office, may be found on pages 2 to 8, inclusive, in Tables I, II and III.

The whole number reported is 8,550, as before stated, and is 330 more than the number in 1889.

SEX OF THE CHILDREN BORN.

Of the 8,550 children whose births were registered in 1890, there were 4,351 males and 4,199 females. This gives 103.5 males to each 100 females, or 508 males and 492 females in each 1,000 children.

The following Table shows the numbers and sex, and the proportions of each sex of the children born in Rhode Island, during the ten years 1854-1863, and in each of the last twenty-seven years:

TABLE XVII.

Years.	Males.	Females.	Males to each 100 Females	Per 1,000 Births Males. Females.
1854-1863	19,356	18,636	103.6, or.....	508.8 and 491.2
1864	1,949	1,942	100.3, or.....	500.9 and 499.1
1865	2,006	1,857	112.9, or.....	530.2 and 469.8
1866	2,546	2,356	108.0, or.....	519.4 and 480.6
1867	2,665	2,464	107.0, or.....	518.7 and 481.3
1868	2,745	2,627	104.5, or.....	511.0 and 489.0
1869	2,685	2,560	104.9, or.....	511.9 and 488.1
1870	2,679	2,536	105.6, or.....	513.7 and 486.3
1871	2,878	2,800	102.8, or.....	506.9 and 493.1
1872	3,085	3,058	100.9, or.....	502.2 and 497.8
1873	3,135	2,887	108.6, or.....	520.6 and 479.4
1874	3,311	3,155	104.9, or.....	512.1 and 487.9
1875	3,362	3,146	106.9, or.....	516.6 and 483.4
1876	3,291	3,038	108.3, or.....	520.0 and 480.0
1877	3,163	3,072	103.0, or.....	507.3 and 492.7
1878	3,402	3,312	102.7, or.....	506.7 and 493.3
1879	3,250	3,091	102.4, or.....	513.2 and 486.8
1880	3,241	3,054	106.8, or.....	514.8 and 485.2
1881	3,408	3,263	107.2, or.....	517.3 and 482.7
1882	3,509	3,316	105.8, or.....	514.1 and 485.9
1883	3,548	3,408	101.4, or.....	503.5 and 496.5
1884	3,713	3,592	103.4, or.....	508.3 and 491.7
1885	3,591	3,437	101.4, or.....	510.3 and 489.7
1886	3,897	3,721	104.6, or.....	511.3 and 488.7
1887	3,968	3,700	107.2, or.....	517.5 and 482.5
1888	4,023	3,817	105.4, or.....	513.1 and 486.9
1889	4,193	4,027	104.1, or.....	510.0 and 490.0
1890	4,351	4,199	103.5, or.....	508.8 and 491.2

It has been previously remarked that in no year since the commencement of registration have the number of female births equalled the number of male births.

At about five years of age the proportion of the sexes is very nearly equal, a larger number of male children dying under five years of age than of female.

PROPORTION OF THE SEXES. *Localities.*

In Table II, on pages 6 and 7, will be found the number of children born in the different divisions of the State during the year 1890, together with the number of each sex.

The following Table will give more concisely the whole number of children born, arranged according to sex and locality, and the proportion of male children to every 100 female children :

TABLE XVIII.

BIRTHS, 1890.	Bristol County.	Kent County.	Newport County.	Providence County Towns.	Washington County.	Newport City.	Pawtucket.	Providence City.	Woonsocket.	Whole State.
Males	111	339	422	933	188	345	361	1,693	304	4,351
Females.....	115	300	396	870	193	320	336	1,723	266	4,199
Total	226	639	818	1,803	381	665	697	3,416	570	8,550
Males to each 100 females.....	96.5	113 0	106.8	107 2	97.4	107.8	107.4	98.3	114 2	103 6

There was an excess of female births in Bristol county, in 1890, a proportion of about six per cent. In a series of twenty-seven years Bristol county has, in the aggregate, had a larger proportion of male births than any other division of the State.

In Kent county the proportion of male births was much less than in the preceding year, although larger than the average of twenty-seven years.

In Newport county in the whole, as well as in Newport city, the proportion of excess of male births was about three and one-half per cent.

In Providence county towns, and in Pawtucket, an excess of males of about three and one-half per cent., in Woonsocket about six and one-half per cent., and in the whole State about one and nine-tenths per cent.

In Providence city and also in Washington county there was a small excess of female births.

The following Table exhibits the proportions, with births of both sexes, for the past twenty-eight years, in the larger divisions of the State and in the whole State :

TABLE XIX.

NUMBER OF MALES TO EACH 100 FEMALES.

BIRTHS.	Bristol County.	Kent County.	Newport County.	Providence County, Towns.*	Providence City.	Washington County.	Whole State.
1863.....	120.0	98.4	97.0	101.8	111.4	108.7	105.8
1864.....	106.8	87.3	90.6	107.4	97.3	103.4	100.3
1865.....	119.3	118.2	108.8	118.8	113.8	88.1	112.9
1866.....	109.4	113.1	103.4	104.9	108.4	124.0	108.0
1867.....	115.5	98.3	117.8	106.3	104.5	120.1	107.7
1868.....	117.4	88.7	100.2	101.6	102.4	130.5	104.5
1869.....	115.7	116.7	102.7	98.0	107.5	120.6	104.9
1870.....	126.4	111.6	100.0	105.1	104.9	99.5	105.6
1871.....	131.8	97.9	132.5	100.8	95.2	113.3	102.8
1872.....	109.2	92.8	109.1	103.5	95.7	110.6	100.9
1873.....	129.2	113.0	117.9	104.5	109.0	104.7	108.6
1874.....	98.7	111.9	101.3	110.4	102.9	94.0	104.9
1875.....	95.2	103.1	97.7	104.3	109.1	134.3	106.9
1876.....	142.1	104.4	108.5	108.0	106.8	103.7	108.3
1877.....	138.7	102.4	98.5	100.3	104.9	95.3	103.0
1878.....	120.5	120.6	94.8	101.5	106.8	78.8	102.7
1879.....	124.3	95.5	103.6	105.4	105.7	106.3	105.4
1880.....	117.2	110.5	113.5	102.4	107.6	95.4	106.1
1881.....	91.2	111.3	102.0	105.9	109.0	115.7	107.2
1882.....	94.7	110.2	112.5	103.1	106.5	105.7	105.8
1883.....	94.0	97.6	97.0	103.5	102.2	102.2	101.4
1884.....	105.0	111.7	92.9	102.5	105.8	99.0	103.4
1885.....	132.2	107.3	98.0	101.8	103.6	104.3	104.4
1886.....	120.0	81.7	102.6	106.7	105.0	121.7	104.6
1887.....	115.1	121.7	106.6	103.9	107.9	106.7	107.2
1888.....	98.1	105.1	105.0	103.4	107.4	110.2	105.4
1889.....	81.9	122.0	107.5	103.6	101.4	110.2	104.1
1890.....	96.5	113.0	106.8	108.5	98.3	97.4	103.6

* Including cities of Pawtucket and Woonsocket.

The following summary will show in the aggregate the average number of males to each 100 females, born during the twenty-eight years from 1863 to 1890 in the different divisions of the State :

Bristol County.	111.0 males to each 100 females.
Kent County.....	101.5 males to each 100 females.
Newport County.....	106.0 males to each 100 females.
Providence County towns ¹	104.6 males to each 100 females.
Providence City.....	104.5 males to each 100 females.
Washington County.....	105.3 males to each 100 females.
Whole State.....	104.3 males to each 100 females.

BIRTHS AND SEASON.

Table II, on pages 6 and 7 of this report, gives the number of births occurring in the different months of the year, in the several divisions of the State.

According to this Table, the greatest number of births in any one month, in 1890, occurred in December, and the largest in any quarter in the fourth ; a fact frequently observed in this part of the year.

The following Table shows the total number of children born in the State of Rhode Island, according to the returns, in each quarter of each of the last six years ; and also the aggregate number and the percentage of the aggregate of each quarter in thirty-five years, from 1854 to 1888, inclusive :

TABLE XX.

QUARTERS.	1890.	1889.	1888.	1887.	1886.	1885.	1854 to 1888, inclusive.	
							Number.	Per cent.
January—March.....	1,951	1,864	1,862	1,828	1,763	1,669	45,560	23.66
April—June.....	2,083	2,024	1,833	1,859	1,749	1,736	45,491	23.62
July—September.....	2,224	2,160	2,084	1,956	2,011	1,768	50,306	26.12
October—December.....	2,292	2,172	2,061	2,025	2,068	1,885	51,297	26.00
Whole Year.....	8,550	8,220	7,840	7,668	7,621	7,028	192,583	100.00

By the above Table it will be seen that, according to the registration of thirty-seven years, the average proportions of births to the whole number of births, in the different quarters of the year, were as follows :

¹ Including Pawtucket and Woonsocket.

January—March.....	236.6 in every 1,000 births.
April—June.....	236.2 in every 1,000 births.
July—September.....	261.2 in every 1,000 births.
October—December.....	266.0 in every 1,000 births.

The proportions of births in Rhode Island, in the different quarters of the year, to the whole number of births in 1890, were as follows :

1. January—March.....	22.8 per cent., or.....	228 in every 1,000
2. April—June.....	24.4 per cent., or.....	244 in every 1,000
3. July—September.....	26.0 per cent., or.....	260 in every 1,000
4. October—December.....	26.8 per cent., or.....	268 in every 1,000
First six months.....		472 births in every one thousand.
Second six months.....		528 births in every one thousand.

BIRTHS. *Sex and Season.*

In Table II, on pages 6 and 7, will also be found the number of births of *each sex* by months, as they occurred in the different divisions of the State, during the year 1890. From it we ascertain the number of *each of the sexes* born during each quarter of the year, with their relative proportions, and also the aggregates and proportions of the same for the whole State.

The following Table will present a summary of the quarterly periods, number of births and proportions of the sexes, for the same year :

	Males.	Females.	Males to each 100 Females.	Per 1,000, each quarter.	
				Males.	Females.
1. January—March.....	1,016	935	108.6	520	480
2. April—June.....	1,075	1,008	106.6	516	484
3. July—September.....	1,097	1,127	100.3	499	501
4. October—December....	1,163	1,129	103.0	506	494
<hr/>					
Whole year, 1890.....	4,351	4,199	103.6	508	492

The following Table shows the number of male children born to every 100 female children, in each quarter of the last four years ; and also the proportion of births of male children to each 100 female children born, during four periods of five years each, from 1866 to 1885, inclusive :

TABLE XXI.

YEARS.	1890.	1889.	1888.	1887.	5 years.	5 years.	5 years.	5 years.
					1881-1885.	1876-1880.	1871-1875.	1866-1870.
First Quarter.....	108.6	105.7	103.3	100.2	105.8	106.0	101.5	106.7
Second Quarter.....	106.6	97.3	100.0	110.3	104.8	102.7	104.7	107.3
Third Quarter.....	100.3	104.1	106.5	108.8	105.1	107.1	104.8	106.0
Fourth Quarter.....	103.0	109.4	103.1	109.6	102.5	108.2	106.5	104.8
Total average.....	103.6	104.1	105.1	107.2	104.5	106.2	104.2	106.2

The above Table shows the variation of the proportions of the sexes in the different quarters, and months even, in the different years, and seems to conclusively determine that season has very little, if any, influence in the causation of sex.

PARENTAGE.

By reference to Table I, page 4, in the division of births there will be found the parentage of the children born in Rhode Island, during the year 1890. It will be seen that of the whole number, 8,550, there were 4,021 of native parentage, 3,044 foreign, and 1,485 of mixed parentage.

By mixed parentage is meant the children born of native fathers and foreign mothers, and of foreign fathers and native mothers.

Of native fathers there were 789, and of foreign fathers 696.

The following Table will show the number and parentage of the children born in the State, and the variations of the same from year to year, in each of the last three years; and also the number and variations occurring in two periods of five years each, and two of ten years each, from 1858 to 1887, inclusive:

TABLE XXII.

PARENTAGE.	1890.	1889.	1888.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	10 years, 1868 to 1877.	10 years, 1858 to 1867.
Native father and mother.....	4,021	3,020	3,028	15,001	14,169	25,625	20,321
Foreign father and mother.....	3,044	3,656	3,348	15,245	13,562	26,356	19,665
Native father, foreign mother....	789	741	721	3,011	2,327	3,135	1,690
Foreign father, native mother.....	696	803	743	3,378	2,887	4,077	1,696
Parentage not stated.....							293
Total.....	8,550	8,220	7,840	36,668	34,945	59,213	43,665

The following Table of *percentages* will show, in a different and perhaps clearer way, the same changes that have occurred in the proportions of the births in the different classes of parentage during the last three years; and during thirty years, from 1858 to 1887, inclusive, in two periods of five years each and two of ten years:

TABLE XXIII.

PARENTAGE.	1890.	1889.	1888.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	10 years, 1868 to 1877.	10 years, 1858 to 1867.
Native father and mother.	47.02	36.74	38.62	40.91	43.03	41.36	46.84
Foreign father and mother.	35.60	41.47	42.70	41.58	41.23	41.53	45.36
Native father, foreign mother.	9.22	9.02	9.20	8.30	6.95	5.37	3.89
Foreign father, native mother.	8.16	9.77	9.48	9.21	8.79	6.71	3.91
Total.	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The registration of births, in 1890, is of interest as showing for the first time since 1883, a larger proportion of children born of native fathers than of foreign fathers. A considerable number of the native fathers were of foreign parentage.

The percentage of children of mixed parentage was rather less, in 1890, than in either of the previous eight years.

The following Table will present the percentages of children of native and of foreign-born fathers, and of native and foreign-born mothers, respectively, in each of the last three years, and in each of two periods of five years each and two of ten years each, from 1858 to 1887, inclusive:

TABLE XXIV.

CHILDREN WITH	1890.	1889.	1888.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	10 years, 1868 to 1877.	10 years, 1858 to 1867.
Native fathers.	56.3	45.76	47.82	49.21	50.08	48.73	50.73
Foreign fathers.	43.7	54.24	52.18	51.79	49.92	51.27	49.26
Native mothers.	55.2	46.50	48.10	49.91	51.79	50.10	50.75
Foreign mothers.	44.8	53.50	51.90	50.09	48.21	49.90	49.25

The percentage of the children born of foreign mothers, during 1890, will also be noticed as being very considerably less than in any one of the last eight years.

The number of native fathers of children born in 1890, was 1,070 more than the number of foreign fathers, and the number of native mothers was 884 more.

Of the children born in 1889, there were 698 more of foreign fathers than of native fathers, and 574 more of foreign mothers than of native mothers.

BIRTHS OF COLORED CHILDREN.

The number of births of children of colored parentage reported for the year 1890 is 183. The number is 11 less than that of 1889.

In regard to sex, the numbers and proportions were as follows, viz.: Males, 89, females, 94; or 48.6 males and 51.4 females in every 100 births; or 94.6 males to each 100 females.

The following summary will show the changes that have occurred from year to year, in the proportions of the sexes of colored children born in Rhode Island, during the last fifteen years:

Years.	Whole Number.	Males.	Females.	Males to each 100 females.
1876-1885.....	1,762.....	849.....	913.....	93.0
1886.....	212.....	117.....	95.....	123.0
1887.....	211.....	111.....	100.....	111.0
1888.....	202.....	109.....	93.....	117.2
1889.....	194.....	87.....	107.....	81.3
1890.....	183.....	89.....	94.....	94.6

The following Table will show the location, number, sex, etc., of colored births during 1890:

TABLE XXV.

Showing Number, Sex, etc., of Colored Births, 1890.

TOWNS AND CITIES.	Whole Number.	Males.	Females.	COUNTIES.
Bristol.....	2	1	1	Bristol County.... 2
Coventry.....	1	1	.....
East Greenwich.....	5	4	1	
Warwick.....	3	1	2	Kent County..... 9
Middletown	1	1	.....
Tiverton.....	1	.....	1	
Newport City.....	44	22	22	Newport County..... 46
Cranston.....	2	.....	2	
East Providence.....	3	1	2	
Lincoln.....	1	1	.....
Pawtucket.....	4	2	2	
Providence City.....	99	44	55	Providence County..... 109
Exeter.....	5	1	4	
South Kingstown.....	12	10	2	Washington County.... 17
Whole State....	183	89	94	183

NUMBER OF CHILD OF THE MOTHER.

The following Table shows the number of the child of the mother ; that is, how many of the children born were reported as the first, second or third child, etc., of their respective mothers. The statistics on this subject begin with the year 1857, and the following Table includes the children reported during the last six years, and also the total for thirty years, 1857 to 1886, inclusive :

TABLE XXVI.

NUMBER OF THE CHILD OF THE MOTHER.	1885.	1886.	1887.	1888.	1889.	1890.	30 years, 1857-1886.
First	1,663	1,783	1,853	1,998	2,082	2,103	40,496
Second.....	1,362	1,559	1,483	1,545	1,545	1,816	32,941
Third.....	1,033	1,144	1,146	1,182	1,309	1,253	25,747
Fourth.....	767	795	918	881	923	924	19,389
Fifth.....	597	660	585	609	725	699	14,633
Sixth.....	498	481	475	475	503	515	10,704
Seventh.....	345	359	375	329	370	364	7,623
Eighth.....	282	287	289	281	278	294	5,324
Ninth	168	202	198	185	207	187	3,521
Tenth.....	134	131	143	141	162	156	2,278
Eleventh.....	73	87	78	83	96	89	1,345
Twelfth.....	57	55	65	50	47	61	850
Thirteenth.....	27	39	32	38	29	46	459
Fourteenth.....	11	19	15	21	23	22	218
Fifteenth.....	7	10	6	9	12	11	122
Sixteenth.....	1	7	3	4	2	4	63
Seventeenth.....	1	2	3	2	3	2	42
Eighteenth.....	1	1	0	3	3	2	14
Nineteenth.....	1	0	0	1	1	2	6
Twentieth.....	0	0	1	0	0	0	4
Twenty-first.....	0	0	0	0	0	0	3
Twenty-second.....	0	0	0	0	0	0	2
Total.....	7,028	7,621	7,668	7,840	8,220	8,550	165,784

The increase in the whole number of births in 1890, over the previous year, was 330, or about four per cent.

In the class of first child of the mother, the increase was barely one per cent., but in the class of the second child, there was the very unusual increase of about seventeen and one-half per cent.

In the other classes the difference of increase or decrease was very much less than in the class of second child.

There were two births reported in each of the classes of the seventeenth, eighteenth and nineteenth child of the mother.

The proportion of each class to the whole number will be shown by the following Table, which gives the percentage of the children born

in each of the last four years, who were respectively the first, second, third, etc., children of the mothers, and which will also give the average percentage of each class of births, during a period of ten years, from 1868 to 1877, inclusive, and of five years, 1878 to 1882, and from 1883 to 1887, inclusive :

TABLE XXVII.

NUMBER OF THE CHILD.	1890.	1889.	1888.	1887.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	5 years, 1868 to 1877.
First.....	24.59	25.33	25.49	24.16	24.30	23.1	25.2
Second.....	21.25	18.80	19.71	19.34	19.22	18.7	20.7
Third.....	14.65	14.70	15.08	14.94	14.82	16.9	15.5
Fourth....	10.45	11.23	11.28	11.84	11.05	12.2	11.4
Fifth.....	8.17	8.82	7.77	7.63	8.56	9.1	8.1
First to Fifth.....	79.11	78.88	79.33	77.91	77.80	80.0	81.1
Sixth and over....	20.89	21.12	20.67	22.09	22.20	20.0	18.9
Total....	100.00	100.00	100.00	100.00	100.00	100.0	100.0

PLURALITY BIRTHS.

The general statistics in relation to plural births, in Rhode Island, may be found on page 8, in Table III.

There were ninety-nine cases during the year, all but one of which were twins, and one of triplets, thus making the number of one hundred and ninety-nine children.

Of the 199 children of plural birth, 107 were males, and 92 were females.

The cases occurred in the different divisions of the State as follows: Bristol county, 1; Kent county, 6; Newport county towns, 4; Newport city, 17; Providence county towns, 18*; Providence city, 51; Washington county, 2.

The following exhibit will show the parentage of children of plural birth in Rhode Island, in 1890, and number of each :

* Including Pawtucket and Woonsocket.

Parents, both native Americans.....	38
“ “ born in Ireland.....	14
“ “ “ England.....	6
“ “ “ Canada, or French Canadians.....	12
“ “ “ France.....	1
“ “ “ Italy.....	3
“ “ “ Scotland.....	1
“ “ “ Portugal.....	5
“ “ “ Sweden.....	1
“ “ “ Russia.....	1
“ “ “ Germany.....	1
Native father and English mother.....	1
Native father and Irish mother.....	4
English Father and native mother.....	2
French father and German mother.....	1
Irish father and native mother.....	3
Irish father and English mother.....	4
Swedish father and native mother.....	1
<hr/>	
Total children.....	199

The months in which the plurality births occurred were as follows:

January.....11	April.....20	July.....16	October.....22
February....16	May.....12	August.....20	November.....14
March.....18	June.....12	September.....24	December.....14
—	—	—	—
First Quarter.....45	Second Quarter....44	Third Quarter.....60	Fourth Quarter....50
First half of year....89		Second half of year....110	
Total.....199			

The general statistics of births, and number of *cases* reported in Rhode Island during a period of thirty-seven years, that is, from 1854 to 1890 inclusive, are as follows :

204,866 cases of single births.....	giving 204,866 children.
2,209 cases of twin births.....	giving 4,418 children.
22 cases of triple births.....	giving 66 children.
1 case of quadruple births.....	giving 4 children.

Of the whole number of *cases* of child-birth (207,098) during the thirty-seven years, one in 94.7 produced twins, one in 9,414 produced triplets, and one in 207,098 produced quadruplets.

Of the whole number of children born during the same period, (209,354), ascertained from the reports, one in every 47.4 was a twin, and one in every 3,172 was a triplet.

Of the 2,232 *cases* of plurality birth which have occurred in the State during the last thirty-seven years, there were 915 cases in which both parents were natives; 1,047 cases in which both parents were foreign; 262 cases in which the parentage was mixed, that is, one native and one foreign parent; and 8 in which the parentage was not stated.

The whole number of children born in plurality cases, during the thirty-seven years, was 4,488, of whom 2,265 were males, and 2,219 were females; the sex of the remaining four was not given.

STILL-BORN.

The whole number of still-born children reported in Rhode Island, for the year 1890, was 296; this number is 33 less than for the year 1889.

The following are the numbers reported from the different divisions of the State :

Bristol County	4
Kent County	13
Newport County Towns.....	5
Newport City.....	20
Providence County Towns.....	44
Pawtucket City.....	18
Providence City.....	165
Woonsocket.....	18
Washington County.. ..	9
<hr/>	
Whole State.....	296

The following Table will give the number in each town from which still-births were reported; with the sex, parentage and color :

TABLE XXVIII.

Still-Born, 1890, Locality, Number, Sex, Parentage and Color.

TOWNS AND DIVISIONS OF THE STATE.	Whole Number.	SEX.		PARENTAGE.		COLOR.	
		Males.	Females.	Native.	Foreign.	White.	Colored.
Barrington	2	1	1	.....	2	2	.....
Bristol.....	1	1	.....	1	.....	1	.....
Warren... ..	1	1	.....	.....	1	1	.....
BRISTOL COUNTY	4	3	1	1	3	4	.....
Coventry.....	5	5	.....	5	.....	5	.....
East Greenwich.....	1	.....	1	.....	1	1	.....
West Greenwich.	1	1	.....	1	.....	1	.....
Warwick	6	4	2	4	2	6	.....
KENT COUNTY.	13	10	3	10	3	13	.....
Middletown.....	1	.....	1	.....	1	1	.....
NEWPORT CITY.....	20	10	10	12	8	17	3
New Shoreham.....	2	1	1	2	.....	2	.....
Tiverton.....	2	1	1	2	.....	2	.....
NEWPORT COUNTY.....	25	12	13	16	9	22	3
Burrillville	5	3	2	3	2	5	.....
*Cranston	2	2	.....	2	.....	2	.....
Cumberland	2	1	1	1	1	2	.....
East Providence.....	6	2	4	4	2	6	.....
Johnston.....	4	3	1	4	.....	4	.....
Lincoln.....	18	11	7	7	11	18	.....
North Providence.....	1	.....	1	1	.....	1	.....
PROVIDENCE CITY	165	100	65	174	91	155	10
PAWTUCKET.....	18	10	8	9	9	18	.....
Scituate.....	4	4	.....	3	1	4	.....
Smithfield.....	2	1	1	1	1	2	.....
WOONSOCKET	18	14	4	7	11	18	.....
PROVIDENCE COUNTY	245	149	96	116	129	235	10
North Kingstown.....	3	3	.....	3	.....	3	.....
South Kingstown.. ..	3	2	1	2	1	2	1
Narragansett	1	1	.....	1	.....	1	.....
Westerly.....	2	2	.....	.....	2	2	.....
WASHINGTON COUNTY.....	9	8	1	6	3	8	1
WHOLE STATE.....	296	184	112	149	147	282	14

SUMMARY OF SEX OF STILL-BORN.

The following Table shows the number and sex of the still-born children whose births were reported in Rhode Island, during each of the last five years, and also of a period of thirty-two years, extending from January 1, 1854, to December 31, 1885:

TABLE XXIX.

SEX.	1890.	1889.	1888.	1887.	1886.	January 1, 1854, to Dec. 31, 1885.
Males.....	184	186	164	169	157	3,824
Females.....	112	143	131	107	136	2,674
Total.....	296	329	295	276	293	6,498

The average proportions of the sexes of the still-born, for the period of thirty-two years, were as follows: In every 100 still-births there were about 59 males and 41 females.

Season of Still-Births.—During 1890 and also the thirty-two years included in Table XXIX, the proportions in relation to season, by percentage, were as follows:

	1890.	32 years.		1890.	32 years.
First Quarter.....	25.00.....	24.82	Third Quarter.....	25.00.....	26.82
Second Quarter.....	26.35.....	23.16	Fourth Quarter.....	23.65.....	25.20
Per cent. first half of the year..	51.35.....	47.98	Last half of the year.....	48.65.....	52.02

The births of the still-born in the different months of the year, although somewhat variable in number, do not, as a rule, show great discrepancies.

PARENTAGE OF THE STILL-BORN.

Of the 296 still-born children reported in 1890, there were 149 of native, and 147 of foreign parentage, reckoned by the nativity of the fathers, that is, the father's name given; and 152 of native and 144 of foreign, reckoned by the nativity of the mothers, name of father given or not given.

To show the changes that have occurred in the percentages of the parentage of *the still-born*, reckoning by the parentage of the mothers, in contrast with the percentages of the same nativities to the *whole number of births*, reckoned by the parentage of the father, the following resumé, for various years and periods of years, is presented :

Years.	Of Whole Number Births.		Of Whole Number Still-Born.	
	Native.	Foreign.	Native.	Foreign.
14 years,				
1859-1872.....	50.54	and 49.46	in each 100.....	51.84 and 48.16 in each 100.
10 years,				
1873-1882.....	49.10	and 50.90	in each 100.....	51.84 and 48.16 in each 100.
1883.....	49.94	and 50.06	in each 100.....	50.98 and 49.02 in each 100.
1884.....	49.91	and 50.09	in each 100.....	49.63 and 50.37 in each 100.
1885.....	49.76	and 50.24	in each 100.....	48.00 and 52.00 in each 100.
1886.....	49.74	and 50.26	in each 100.....	47.44 and 52.56 in each 100.
1887.....	47.04	and 52.96	in each 100.....	49.63 and 50.37 in each 100.
1888.....	47.62	and 52.38	in each 100.....	48.47 and 51.53 in each 100.
1889.....	45.75	and 54.25	in each 100.....	46.51 and 53.49 in each 100.
1890.....	56.24	and 43.76	in each 100.....	51.35 and 48.65 in each 100.

While the native mothers have less physical vigor as a rule, the foreign mothers are more frequently the subjects of violence, imprudently self-imposed or extraneous, and therefore the relative or actual numbers do not greatly differ, but the average expectation or average probability of completing the full term of gestation with ordinary viability of the child, in the two classes, may perhaps be better shown by ascertaining the proportion of the still-born to the whole number of births of each class of mothers.

In the class of native parentage (that is, natives of the United States, although a large proportion of those reckoned as native are the children of foreign born parents), the ratio was 3.3 in every one hundred births, and in the class of foreign parentage the ratio was 3.7 in every one hundred.

ILLEGITIMATES.

The following Table will exhibit the number, sex, color, parentage and locality of birth of illegitimates in Rhode Island, in 1890 :

TABLE XXX.

Illegitimates, 1890.

TOWNS.	Whole Number.	SEX.		COLOR.		PARENTAGE.		Charities, and Penal Institutions.
		Males.	Females.	Colored.	White.	Native.	Foreign.	
Coventry.....	3	2	1	.....	3	2	1	.....
West Greenwich.....	1	.....	1	.....	1	1	.....	.....
Warwick.....	2	1	1	1	1	2	.....	.....
Tiverton.....	1	.....	1	1	.....	1	.....	.....
Newport City.....	6	.....	6	2	4	3	3	3
Cranston.....	6	3	3	1	5	3	3	5
Cumberland.....	1	1	.....	.....	1	.....	1	.....
East Providence.....	2	1	1	.....	2	.....	2	.....
Glocester.....	1	.....	1	.....	1	1	.....	.....
Lincoln.....	6	3	3	.....	6	1	5	1
Pawtucket.....	1	1	.....	.....	1	1	.....	.....
Woonsocket.....	5	2	3	.....	5	4	1	.....
Providence City.....	50	20	30	11	39	30	20	32
Charlestown.....	1	.....	1	.....	1	1	.....	.....
Exeter.....	4	2	2	3	1	4	.....	.....
Hopkinton.....	2	2	.....	2	.....	2	.....	.....
South Kingstown.....	2	2	.....	1	1	2	.....	.....
Westerly.....	3	2	1	.....	3	2	1	.....
Whole State.....	97	42	55	22	75	60	37	41

There were returns, during 1890, of 97 children of illegitimate parentage. The number is 34 more than that of 1889.

Sex.—Of the 97 there were 42 males and 55 females.

Color.—Of the 97 illegitimates born during 1890, 75 were white, and 22 colored.

Parentage.—Of the 97, 60 were born of native mothers and 37 of foreign born mothers. The colored illegitimates were, with one exception, of native parentage. There were, of the 75 white illegitimates, 39 born of native mothers, and 36 of foreign born mothers.

The parentage given is of native born and foreign born, that is, the native born including all mothers born in the United States, although said mothers may have been in part the children of foreign born parents.

Forty-one of the illegitimates were born of indigent, pauper or criminal mothers, in public, charitable or penal institutions.

The proportion of illegitimates to the whole number of births was about one in every 88 cases, or about eleven in every 1,000 births.

MARRIAGES, 1890.

The number of marriages registered in Rhode Island, during the year 1890, was 3,195. This number is 173 more than in 1888, and 164 more than in 1889.

The general statistics of marriage in 1890, in relation to season and number, in the different divisions of the State, may be found in Table IV, on the ninth page.

The statistics in relation to the proportion to population of persons married in 1890, in each of the towns and general divisions of the State, may be found in Tables XV and XVI, on pages 100 and 103.

The following Table will present the number of marriages, and the ratio of marriage to population, in each year for a period of thirty-one years, 1860 to 1890, inclusive :

TABLE XXXI.

YEARS.	Number Marriages.	Of population, one person married in every	Persons married per 1,000 of population.	YEARS.	Number Marriages.	Of population, one person married in every	Persons married per 1,000 of population.
1860.....	1,748	50.0	20.0	1876.....	2,253	57.3	17.5
1861.....	1,533	56.8	17.6	1877.....	2,282	56.6	17.7
1862.....	1,450	61.1	15.1	1878.....	2,324	55.7	17.9
1863.....	1,618	54.7	18.3	1879.....	2,396	57.8	17.5
1864.....	1,844	50.1	19.9	1880.....	2,769	49.9	20.0
1865.....	1,896	48.7	20.5	1881.....	2,750	50.3	19.9
1866.....	2,318	39.9	25.1	1882.....	2,634	52.5	19.0
1867.....	2,344	39.8	25.1	1883.....	2,611	54.4	18.3
1868.....	2,285	40.5	24.8	1884.....	2,558	58.1	17.2
1869.....	2,289	47.5	21.1	1885.....	2,488	61.3	16.3
1870.....	2,362	46.0	21.7	1886.....	2,750	56.5	17.7
1871.....	2,336	46.5	21.5	1887.....	2,839	55.8	18.0
1872.....	2,537	42.9	23.2	1888.....	3,022	53.5	18.7
1873.....	2,630	41.3	24.2	1889.....	3,029	57.8	17.3
1874.....	2,541	50.8	19.6	1890.....	3,195	54.1	18.4
1875.....	2,485	52.0	19.2	Annual Average...		52.7	18.9

SEASON.

The following Table will show the number and percentage of marriages in Rhode Island, in each month and each quarter of the year 1890, together with the aggregate number and percentage in each quarter for thirty-five years, viz., from 1854 to 1888, inclusive:

TABLE XXXII.

MONTHS.	Number of Marriages each Month.	Number of Marriages each Quarter, 1890.	Percentage of each Quar. to total Marriages, 1890.	Number of Marriages per Quarter, 35 yrs., 1854-1888.	Percentage each Quarter, 35 years.
January.....	271	1st Quarter... 649	20.37	1st Quarter... 16,852	22.03
February....	243				
March.....	135				
April	325	2d Quarter... 876	27.53	2d Quarter... 19,025	24.88
May.....	246				
June.....	305				
July.....	209	3d Quarter... 756	23.73	3d Quarter... 17,897	23.39
August.....	238				
September....	319				
October.....	338	4th Quarter.. 914	28.37	4th Quarter... 22,691	29.70
November....	363				
December.....	213				
Total.....		3,195	100 00	*76,485	100.00

The largest number of marriages, in any one month during 1890, occurred in the month of November. This is in accordance with the rule for thirty-five years.

There was an agreement with the rule, also, in the proportions of the number of marriages, in the different quarters of the year, to the whole number during the year. The rule has been as follows: The largest proportion in the last quarter; the next largest in the second quarter; followed by the third quarter; and, finally, the first quarter having the smallest proportion of any.

During 1890 the proportions in the different quarters, from the largest to the smallest, were as follows: Last quarter, 28.37 per cent.; second quarter, 27.53 per cent.; third quarter, 23.73 per cent.; first quarter, 20.37 per cent.

NATIVITY OF PERSONS MARRIED.

The following table shows the *number* of marriages, according to the nativities of the parties, for each of the last five years, and also

* Including 20, date not given, recorded previous to 1860.

for the aggregate of five years, from 1883 to 1887, inclusive, and of twenty-five years, from 1858 to 1882, inclusive :

TABLE XXXIII.

BIRTH-PLACE.	1890.	1889.	1888.	1887.	1886.	5 years. 1883-1887. Total.	25 years. 1858-1882. Total.
United States.....	1,555	1,539	1,496	1,465	1,480	7,157	33,553
Foreign countries.....	951	908	935	808	739	3,601	13,753
Native groom, foreign bride.....	345	274	329	303	290	1,323	3,488
Foreign groom, native bride.....	344	308	262	263	241	1,165	3,876
Not stated.....							64
Total.....	3,195	3,029	3,022	2,839	2,750	13,246	54,734

It will be understood that in the above enumeration the *parent nativity* of the persons married is not considered, but the country where born.

Parties born in the United States, although children of foreign born parents, are reckoned as natives.

In the following Table are given the *percentages* by birth, of native, foreign and mixed marriages, in each of the last five years and in the aggregate of five years, 1883 to 1887, inclusive, and of twenty-five years, 1858 to 1882, inclusive :

TABLE XXXIV.

BIRTH-PLACE.	1890.	1889.	1888.	1887.	1886.	5 years, 1883-1887.	25 years, 1858-1882.
United States.....	48.67	50.88	49.50	51.60	53.81	54.02	61.30
Foreign countries.....	29.76	33.28	30.94	28.46	26.87	27.19	25.13
Mixed nativity.....	21.57	15.84	19.56	19.94	19.32	18.79	13.57
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00

It will be of some interest to notice that by the exhibit of the two preceding Tables, it is shown that, although the marriages of the native born (whether the progeny of foreign born parents or natives)

have steadily *increased in numbers*, they have also steadily *decreased in proportion*, with two or three exceptional years, that is, to the whole number of marriages, while the marriages of the class of the exclusively foreign born, have been, for thirty years preceding 1890, gradually increasing in proportion.

In the class of mixed nativity, there was a very large increase in 1890, reaching a proportion nearly 40 per cent. higher than that of the previous year.

The falling off of the percentage of marriages of the class of exclusive foreign born, during 1890, may be only a temporary interruption.

AGES OF PERSONS MARRIED.

The following Table will show the number of grooms who were married, in 1890, to brides in the same age periods of life, or in age periods earlier or more advanced :

TABLE XXXV.

AGES OF GROOMS.	AGES OF BRIDES.													Number of Grooms.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	
Under 20.....	58	40	5	...	...	...	...	...	...	...	...	...	...	103
20 to 25.....	282	772	112	11	2	1	1	...	...	...	...	...	...	1,181
25 to 30.....	120	486	316	46	13	2	...	...	...	...	...	...	...	983
30 to 35.....	24	137	130	90	11	6	1	...	...	...	...	...	...	399
35 to 40.....	8	50	59	56	23	12	...	...	...	...	...	...	...	208
40 to 45.....	1	13	15	39	31	17	2	1	...	...	...	...	...	119
45 to 50.....	...	10	7	11	11	21	12	2	...	...	...	...	...	74
50 to 55.....	...	3	2	11	10	13	7	4	...	...	...	...	...	50
55 to 60.....	...	1	2	4	6	9	1	4	4	3	...	...	...	34
60 to 65.....	...	...	1	3	2	4	2	3	...	3	1	...	...	19
65 to 70.....	...	...	...	3	2	1	1	2	2	3	2	...	...	16
70 to 75.....	...	...	...	...	1	1	1	3	...	...	1	...	...	7
75 to 80.....	...	...	...	...	...	...	...	...	1	1	...	...	...	2
Number of Brides..	493	1,512	649	274	112	87	28	19	7	10	4	...	...	3,195

The exceptional cases of the marriages of persons with great discrepancies of age, so noticeable in previous years, have not so large a showing for 1890, although that lack of good judgment was not entirely absent, as may be seen in the above Table.

The same results, in 1890, in relation to numbers in the different age periods, may be presented in a different and perhaps clearer way as follows :

TABLE XXXVI.

1890.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	Not stated.
Males.....	103	1,181	983	399	208	119	74	50	34	19	16	7	2	.....	.....	.....
Females.....	493	1,512	649	274	112	87	28	19	7	10	4	.....	.....	.....	.....	.....
Total persons.....	596	2,693	1,632	673	320	206	102	69	41	29	20	7	2	.....	.....	.....

The whole number of persons in each division of ages, of both sexes, married in Rhode Island in each of the last twenty-five years, that is, from 1866 to 1890, inclusive, is presented in the following Table :

TABLE XXXVII.

YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	Not stated.
1866.....	693	1,931	1,025	419	213	127	81	59	25	21	12	1	.....	.....	.....	23
1867.....	696	1,886	1,104	416	211	148	91	48	37	18	18	5	3	1	.....	9
1868.....	644	1,835	1,050	432	219	133	82	61	30	29	11	8	4	.....	.....	32
1869.....	642	1,814	1,051	468	227	134	79	46	35	15	11	2	3	2	.....	49
1870.....	744	1,883	1,084	415	216	159	86	64	26	24	12	3	2	.....	.....	6
1871.....	697	1,914	1,118	392	228	115	73	56	35	22	6	7	3	.....	.....	6
1872.....	786	2,073	1,182	434	237	131	81	61	43	21	13	6	1	.....	.....	5
1873.....	762	2,177	1,156	507	253	140	87	68	35	24	12	6	6	.....	.....	27
1874.....	770	1,992	1,179	459	268	159	101	52	36	39	8	9	1	.....	.....	9
1875.....	681	2,058	1,108	475	252	150	101	60	32	29	13	4	1	.....	.....	6
1876.....	691	1,741	1,041	450	224	154	80	53	27	19	12	1	2	.....	.....	9
1877.....	631	1,745	1,118	459	244	125	92	52	46	11	15	11	2	1	.....	9
1878.....	618	1,832	1,123	441	259	162	74	49	39	20	17	2	4	.....	.....	8
1879.....	639	1,879	1,156	481	272	123	78	56	39	26	18	9	2	2	1	11
1880.....	688	2,301	1,262	556	329	163	91	65	33	27	15	3	3	1	.....	1
1881.....	599	2,208	1,410	547	298	187	107	54	34	31	16	5	1	1	.....	2
1882.....	498	2,125	1,377	563	301	161	102	57	36	27	11	5	3	2	.....	.....
1883.....	497	2,108	1,370	486	319	183	115	73	31	20	14	3	2	1	.....	.....
1884.....	481	2,027	1,289	569	307	152	114	64	48	30	23	6	3	.....	.....	.....
1885.....	438	1,973	1,296	540	309	163	102	57	45	27	13	7	3	.....	1	2
1886.....	505	2,133	1,552	603	283	174	103	73	24	26	18	5	1	.....	.....	.....
1887.....	501	2,308	1,552	607	294	162	114	49	39	23	19	7	3	.....	.....	.....
1888.....	582	2,427	1,608	610	330	207	105	60	36	17	23	7	2	.....	.....	.....
1889.....	543	2,463	1,492	712	379	182	121	66	45	8	16	9	.....	2	.....	.....
1890.....	596	2,693	1,632	673	320	206	102	69	41	29	20	7	2	.....	.....	.....

The following summary will show the number of persons married, the number of persons married under twenty years of age, and the percentages of marriages of persons under twenty years of age, during four periods of five years each, that is, from 1870 to 1889, inclusive, and during the years 1889 and 1890 :

	Number of persons married.	Number married under twenty years of age.	Percentage of persons married under twenty years of age.
1870 to 1874.....	24,812.....	3,759.....	15.2
1875 to 1879.....	23,480.....	3,260.....	13.9
1880 to 1884.....	26,644.....	2,766.....	10.4
1885 to 1889.....	28,256.....	2,569.....	9.1
1889.....	6,058.....	543.....	8.9
1890.....	6,390.....	596.....	9.3

In the following Table will be found the number and proportion of the persons married under 20 years of age, of both sexes, in seven periods of five years each, from 1854 to 1888, inclusive; for the whole period of thirty-five years, and in 1889 and 1890 :

TABLE XXXVIII.

5-YEAR PERIODS.	Total number of persons married.	Persons married under 20.	Percentage under 20.
1854-1858.....	13,842	1,332	13.95
1859-1863.....	16,042	2,500	15.58
1864-1868.....	21,374	3,049	14.26
1869-1873.....	24,308	3,631	14.93
1874-1878.....	23,770	3,391	13.84
1879-1883.....	26,320	2,921	11.09
1884-1888.....	27,314	2,510	9.19
35 years, 1854-1888.....	152,970	19,934	13.03
1889.....	6,058	543	8.09
1890.....	6,390	596	9.32

Per cent., first fifteen years.....	14.60
Per cent., second fifteen years.....	13.28
Per cent., last five years.....	9.08

PROPORTION OF SEX.

Table exhibiting the percentages of GROOMS in each division of ages, in each of the last thirty-one years :

TABLE XXXIX.

YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 & over.	Total.
1860.....	5.0	42.8	26.9	16.3	5.7	3.3	100.0
1861.....	4.6	44.5	25.4	15.5	5.8	4.2	100.0
1862.....	4.2	37.8	27.9	18.3	5.9	5.9	100.0
1863.....	3.5	38.0	29.6	17.2	5.8	5.9	100.0
1864.....	4.3	38.8	27.3	17.9	7.4	4.3	100.0
1865.....	3.5	37.0	28.4	18.9	7.5	4.7	100.0
1866.....	5.3	40.9	27.0	16.4	6.3	4.1	100.0
1867.....	4.3	40.1	27.9	16.8	6.8	4.1	100.0
1868.....	4.1	39.9	28.2	17.1	6.1	4.6	100.0
1869.....	4.3	39.6	27.7	18.5	6.1	3.8	100.0
1870.....	4.8	40.4	28.1	16.0	6.4	4.3	100.0
1871.....	5.3	40.1	28.9	16.5	4.9	4.3	100.0
1872.....	4.3	41.3	28.2	16.6	5.2	4.4	100.0
1873.....	3.8	42.4	26.7	17.0	6.0	4.1	100.0
1874.....	4.1	40.4	27.2	17.5	6.4	4.4	100.0
1875.....	3.5	40.9	27.8	17.6	6.1	4.2	100.0
1876.....	5.1	37.5	28.6	17.9	5.6	4.3	100.0
1877.....	4.3	36.0	30.2	18.7	5.9	6.9	100.0
1878.....	3.9	38.5	29.0	18.0	6.3	4.3	100.0
1879.....	3.9	37.8	28.8	19.3	5.4	4.8	100.0
1880.....	3.6	38.9	27.5	19.9	5.8	4.3	100.0
1881.....	2.8	37.2	29.7	19.5	6.8	4.0	100.0
1882.....	2.2	36.0	31.4	20.0	6.1	4.3	100.0
1883.....	2.9	36.2	31.7	17.7	7.2	4.3	100.0
1884.....	2.5	36.2	29.1	21.0	6.2	5.0	100.0
1885.....	2.6	34.7	30.2	20.9	6.8	4.8	100.0
1886.....	2.5	35.2	31.9	19.6	6.8	4.0	100.0
1887.....	1.7	37.1	31.6	19.6	6.2	3.8	100.0
1888.....	2.8	36.1	31.1	19.8	6.5	3.7	100.0
1889.....	2.3	37.6	27.8	21.3	6.6	4.4	100.0
1890.....	3.3	36.9	30.8	18.9	6.1	4.0	100.0

GROOMS.

Table exhibiting the percentages of BRIDES in each division of ages, in each of the last thirty-one years :

TABLE XL.

YEARS.	AGES.						Total.
	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 & over.	
1860.....	25.8	41.1	17.0	9.1	2.6	1.4	100.0
1861.....	29.6	42.0	15.2	7.8	4.1	1.3	100.0
1862.....	24.9	41.3	16.7	11.8	4.1	1.2	100.0
1863.....	24.9	42.6	16.9	9.8	4.1	1.7	100.0
1864.....	24.2	43.4	17.8	10.3	2.9	1.4	100.0
1865.....	22.6	43.3	19.1	11.0	3.5	1.5	100.0
1866.....	24.7	42.9	17.4	11.0	2.7	1.3	100.0
1867.....	25.4	40.5	19.3	10.0	3.4	1.4	100.0
1868.....	24.4	40.9	18.1	11.6	3.3	1.7	100.0
1869.....	24.1	40.5	18.7	12.1	3.4	1.2	100.0
1870.....	26.8	39.4	17.9	10.8	3.9	1.2	100.0
1871.....	24.6	41.9	19.1	10.1	3.1	1.2	100.0
1872.....	26.7	40.5	18.4	9.9	2.2	1.3	100.0
1873.....	25.3	40.8	17.5	12.0	2.7	1.7	100.0
1874.....	26.3	38.1	19.3	11.1	3.9	1.3	100.0
1875.....	23.9	42.1	16.8	11.8	4.0	1.4	100.0
1876.....	25.6	39.8	17.6	12.0	3.7	1.3	100.0
1877.....	23.4	40.4	18.8	12.1	3.6	1.7	100.0
1878.....	22.7	40.4	19.3	12.2	3.8	1.6	100.0
1879.....	22.8	40.7	19.4	12.1	3.0	2.0	100.0
1880.....	21.1	44.2	18.0	12.0	3.3	1.4	100.0
1881.....	19.0	43.0	21.5	11.2	3.8	1.5	100.0
1882.....	16.7	41.8	20.9	12.6	3.9	1.1	100.0
1883.....	16.2	44.2	20.6	13.2	4.3	1.5	100.0
1884.....	16.4	43.0	21.3	13.2	4.2	1.9	100.0
1885.....	14.9	41.6	21.8	13.2	3.8	1.7	100.0
1886.....	15.8	42.4	24.5	12.5	3.3	1.5	100.0
1887.....	15.9	44.1	22.8	12.1	3.5	1.6	100.0
1888.....	16.4	44.3	22.1	12.4	3.7	1.1	100.0
1889.....	15.1	43.7	21.5	14.7	3.4	1.6	100.0
1890.....	15.4	47.3	20.4	12.0	3.6	1.3	100.0

It will be noticed, in the preceding Tables, that the proportions of persons married of both sexes, under twenty years of age, largely decreased during the last decade.

Of males, the proportion, compared with the first decade, has decreased nearly 48 per cent., and of females about 30 per cent.

The proportion of males married, between the ages of twenty and twenty-five, has decreased about 11 per cent., and has correspondingly increased in the more advanced age periods.

The proportion of females married, between twenty and twenty-five years of age, has slightly decreased, while of those between twenty-five and forty there has been an increase of proportion similar to that of males.

NUMBER OF TIMES MARRIED.

There will be found in the following Table the number of grooms and of brides who were married for the first, second, third, etc., time, in 1890 :

TABLE XLI.

	First Marriage.	Second Marriage.	Third Marriage.	Fourth Marriage.	Fifth Marriage.	Sixth Marriage.	Total.
Grooms.....	2,688	464	40	3	.....	.....	3,195
Brides.....	2,832	343	19	1	.....	.....	3,195

The proportion of *grooms* married for the first time, in 1890, was 84.1 per cent. of the whole number, and the proportion of *brides* married for the first time was 88.6 per cent.

The following Table will show not only the number of times each of the parties were married, but also the number of bachelors and widowers who married spinsters, the number who married widows of first or second widowhood, etc., and of spinsters and widows who married bachelors, and widows of the second, third or fourth marriage, etc. :

TABLE XLII.

GROOMS.	BRIDES.					Total Grooms.
	First.	Second.	Third.	Fourth.	Fifth.	
First marriage.....	2,517	166	5	.....	.....	2,688
Second marriage.....	297	156	10	1	.....	464
Third marriage.....	17	19	4	.....	.....	40
Fourth marriage.....	1	2	.....	.....	.....	3
Fifth marriage.....	.....	.....	.....	.....	.....	.....
Sixth marriage.....	.....	.....	.....	.....	.....	.....
Total Brides.....	2,832	343	19	1	.....	3,195

It will be seen, by Table XLII, that 171 bachelors married widows, 5 of whom married brides that had been twice widowed. Of the 507 widowers who married in 1890, 315 married spinsters, and 192 married widows. Of the widows who married widowers, 14 had been twice married previously.

MARRIAGES OF PERSONS OF COLOR.

The number of marriages of persons of color, in Rhode Island, in 1890, was 77. This includes three marriages in which one of the parties was white. The number and color of the individuals were, therefore, 151 persons of color and 3 persons white. The white persons were all females. The marriages, however, may be properly included in the above class, inasmuch as the offspring of such marriages are persons of color.

The number reported during 1890, from the different towns, was as follows, viz.:

Warwick.....	4
Newport City.	7
East Providence.....	1
Providence City (including 2 white brides).....	63
Exeter.....	1
Hopkinton.....	1
South Kingstown (including one white bride).....	1
Total.	77

MARRIAGES OF THE DIVORCED.

The following Table will give the towns from which returns of marriage with the facts of divorce were reported during 1890, the whole number of marriages of divorced persons, whether of one or both parties; also whether the second or third marriage of the divorced groom or bride; and number of remarriages of same persons:

TABLE XLIII.

TOWNS.	Number of Marriages.	Number of Divorced Persons Married.	Grooms.	Brides.	Second Marriage of Groom.	Third Marriage of Groom.	Second Marriage of Bride.	Third Marriage of Bride.	Re-marriages, Same Parties.
Providence City.	91	102	50	52	47	3	52	.....	1
Warwick.....	4	4	1	3	1	.....	3	.....	.....
Westerly.....	1	1	.....	1	.....	.....	1	.....	.....
North Kingstown.....	1	1	.....	1	.....	.....	1	.....	.....
Hopkinton.....	4	4	2	2	2	.....	2	.....	.....
Total State.....	101	112	53	59	50	3	59	.....	1

There were 101 marriages, in 1890, in which one or both of the parties had been divorced, and in 11 of which both parties had been divorced. Of the 11 marriages where both parties had been divorced, 1 was a remarriage of the same persons.

The proportion of the *number of marriages*, of which one or both of the parties had been divorced, to the whole number of marriages, was about one in every 31, or a little over 3.0 per cent.

But the proportion of divorced *persons* married during 1890, to the whole number of persons married in the same year, was about one in every 28.5, about 3.5 per cent., or 35 in every 1,000.

The number of divorced persons married, in 1890, was 23 less than in the previous year.

DIVORCES, 1890.

According to the returns made to the Secretary of the State Board of Health (State Registrar) by the clerks of the Supreme Courts of the different counties in Rhode Island, the number of applications for divorce, during 1890, was three hundred and twenty-seven (327).

The number of divorces granted, during 1890, was two hundred and forty-four (244).

There were thirty-nine less applications, during 1890, than during the preceding year, and the number of divorces granted was 30 less.

Divorces are decreed for the following seven statute causes, viz.:

1. Adultery.
2. Extreme cruelty.
3. Wilful desertion for five years of either of the parties, or for a shorter period, in the discretion of the court.
4. Continued drunkenness.
5. Neglect or refusal to provide necessities (having ability) for the subsistence of a wife.
6. Gross misbehavior and wickedness other than aforesaid.
7. Impotency.

Divorces are also decreed, or marriages set aside, in the discretion of the court, for ascertained affinity, consanguinity, idiocy, insanity, penitentiary crimes, and bigamous or otherwise illegal marriage.

The following Table shows the number of applications for divorce, and the number granted, in 1890, in each county of the State; also the causes alleged for the applications:

TABLE XLIV.

COUNTIES.	Number of Applications.	Number Granted.	CAUSES ALLEGED.							Total Causes Alleged.
			Adultery.	Extreme Cruelty.	Wilful Desertion.	Continued Drunkenness.	Neglect to Provide Necessaries, &c.	Other Gross Misbehavior.	Impotency.		Illegal Marriage.
Bristol.....	11	4	1	3	2	2	3	.....	.....	11
Kent.....	26	19	1	.....	14	.....	4	.....	.....	19
Newport.....	6	1	.....	3	2	1	4	1	.....	11
Providence.....	268	196	36	87	144	86	178	35	1	567
Washington*.....	16	24	1	4	11	6	11	9	.....	42
Whole State.....	327	244	39	97	173	95	200	45	1	650

There were, during the year 1890, three hundred and twenty-seven (327) applications for divorce, and the whole number of causes alleged was six hundred and fifty (650). There was, therefore, an average of rather less than two causes alleged in each application. That average is not far from the rule of many years.

The causes alleged why divorce should be granted, in the applications during 1890, were 41 less in number than in 1889.

In order to show the actual number of applications, and the number of divorces granted in each of the last eighteen years, the following summary is presented:

* Final decree upon 13 applications which were made in 1889.

	Applications for divorce.	Divorces granted.	Applications refused or continued or withdrawn.
1873.....	261.....	173.....	88
1874.....	276.....	242.....	34
1875.....	227.....	158.....	69
1876.....	254.....	196.....	58
1877.....	257.....	178.....	79
1878.....	253.....	106.....	53
1879.....	255.....	246.....	9
1880.....	347.....	273.....	74
1881.....	350.....	268.....	82
1882.....	339.....	271.....	68
1883.....	321.....	257.....	64
1884.....	320.....	266.....	54
1885.....	293.....	227.....	66
1886.....	336.....	257.....	70
1887.....	322.....	248.....	74
1888.....	304.....	224.....	80
1889.....	366.....	274.....	92
1890.....	327.....	244.....	83
18 years, total.....	5,413.....	4,198.....	1,215

The average annual proportion of decrees of divorce granted during the last eighteen years, to the applications therefor, was 77.5 per cent.

During the last eight years the proportions were as follows :

Years.....	1883,	1884,	1885,	1886,	1887,	1888,	1889,	1890.
Per cent.....	80.0.....	83.0.....	78.5.....	76.5.....	77.0.....	73.6.....	74.8.....	74.6

It will be seen that the decrees have diminished considerably in the ratio to the applications, during the last six years.

The proportion of *divorces granted*, in 1890, to the whole number of marriages during the same year, was *one divorce* to every thirteen and one-tenth marriages.

The proportion of *applications for divorce* to whole number of marriages, during the year, was *one application* to every nine and three-fourths marriages.

The larger number of marriages, in 1890, in proportion to the population, will account in part for the lessened *ratio* of applications for divorce, but not for the lessened number granted.

The following Table shows the number of divorces granted in each county, and in the whole State, in each of the last twenty-two years, and the proportion of marriages to each divorce granted in each year :

TABLE XLV.

YEARS.	Bristol County.		Kent County.		Newport County.		Providence County.		Washington County.		Whole State.	
	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.
1869.....	10	10.6	15	12.5	6	27.7	120	13.8	11	15.5	162	14.1
1870.....	3	27.7	18	11.8	6	26.3	152	11.3	21	9.3	200	11.8
1871.....	5	16.8	11	17.9	4	49.7	123	13.3	18	11.4	161	14.5
1872.....	8	10.2	13	15.7	8	22.9	149	12.6	22	8.9	200	12.7
1873.....	6	16.2	22	9.8	8	21.9	131	14.8	6	33.7	173	15.2
1874.....	10	8.9	20	8.0	6	29.0	190	10.0	16	11.6	242	10.5
1875.....	2	50.0	18	8.8	7	23.4	120	14.9	11	20.5	158	15.7
1876.....	6	14.5	15	12.8	7	20.5	148	11.1	20	8.8	190	11.5
1877.....	7	12.0	9	16.3	7	26.0	134	12.4	21	9.9	178	12.8
1878.....	4	26.0	11	13.3	13	12.8	156	10.9	12	17.3	196	11.9
1879.....	5	18.8	19	9.0	7	24.1	195	9.1	20	9.7	246	9.7
1880.....	8	12.1	23	9.4	11	17.6	208	9.7	23	17.0	273	10.1
1881.....	6	20.1	26	7.3	10	16.9	207	10.0	19	11.0	268	10.4
1882.....	6	15.0	18	10.3	15	13.0	221	8.9	11	16.2	271	9.7
1883.....	6	15.8	15	11.5	9	21.2	214	9.2	13	13.3	257	10.2
1884.....	4	16.7	20	8.0	12	15.7	209	9.3	21	8.2	266	9.6
1885.....	3	23.0	9	18.6	17	11.2	186	10.1	12	15.0	227	11.0
1886.....	5	16.0	17	11.0	15	12.3	194	10.9	26	7.3	257	10.7
1887.....	1	75.0	23	8.0	13	13.4	187	11.8	24	7.9	248	11.4
1888.....	5	15.8	14	13.5	4	46.0	188	12.5	13	16.5	224	13.5
1889.....	6	12.5	27	8.3	14	14.0	211	11.2	16	10.8	274	11.1
1890.....	4	27.5	19	12.1	1	232.0	196	12.3	24	8.8	244	13.0

The ratio of divorces granted in the entire State, during 1890, to the whole number of marriages during the same year, was one divorce to about every thirteen and one-tenth marriages, as previously stated.

During the ten years 1869 to 1878, inclusive, the ratio of divorce to number of marriages was one divorce to every thirteen; during the ten years 1879 to 1888, inclusive, the ratio was one divorce to every ten and six-tenths marriages.

The average of the last four years was one divorce to every twelve and four-tenths marriages.

During the twenty-two years 1869-1890, the average proportions of divorce to marriage, in the several counties and the State, have been as follows :

Bristol County.....	One divorce to every 20.8 marriages.
Kent County.....	One divorce to every 10.9 marriages.
Newport County.....	One divorce to every 22.2 marriages.
Providence County.....	One divorce to every 11.3 marriages.
Washington County.....	One divorce to every 13.1 marriages.
Whole State.....	One divorce to every 11.8 marriages.

Table showing the Number of Marriages to every Decree of Divorce, in five of the New England States, during the thirteen years from 1877 to 1889, inclusive:

TABLE XLVI.

STATES.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Rhode Island.....	12.8	11.9	9.7	10.1	10.4	9.7	10.2	9.6	11.0	10.7	11.4	13.5	11.1
Massachusetts.....	23.1	21.4	23.4	26.8	40.9	34.3	27.8	28.2	26.4	30.0	24.5	30.6	26.9
Connecticut.....	10.1	10.7	13.4	13.9	11.6	12.8	12.1	14.9	13.3	14.2	14.9	13.8	10.7
Vermont	15.0	14.0	21.0	20.0	16.0	17.8	16.4	....	....	20.0	13.5	....	....
New Hampshire.....	....	....	....	7.7	9.2	10.9	12.8	10.4	10.9	8.3	10.7	8.7	9.8

DEATHS, 1890.

The number of deaths registered in Rhode Island, during 1890, according to the returns made to the State Registrar, was six thousand, nine hundred and thirty-four (6,934).

This number is larger by 675 than that of the year 1889, and 340 more than that of 1888.

The death-rate (20.7 in every 1,000 living persons), was about one and seven-tenths larger than that of the previous year.

The following summary will show the death-rates per 1,000 for each of the last seven census years, in comparison with 1887, 1888 and 1889:

1860.	1865.	1870.	1875.	1880.	1885.	1887.	1888.	1889.	1890.
15.4.....	18.4.....	14.9.....	16.7.....	17.5.....	17.7.....	19.9.....	20.4.....	19.0.....	20.7

Since 1876 the returns have been more complete than previously, and during the last seven years, few deaths, if any, have occurred in the State and not reported.

On the following page will be found the death-rates, by counties, for thirty-one years :

TABLE XLVII.

Death-rates per 1,000 living, by counties, for thirty-one years, from 1860 to 1890, inclusive; also the average rate of each period of five years each, from 1860 to 1889, inclusive, for the whole State.

YEARS.	Bristol.	Kent.	Newport.	Providence.	Washington.	State.	STATE. ANNUAL AVERAGE OF FIVE-YEAR PERIODS, 1860-1884.
Five years, 1860-1864.....	16.8	15.4	18.1	17.4	12.1	16.5	...16.5 per 1,000 living.
1865.....	22.8	16.1	17.5	19.2	14.2	18.4	...16.5 per 1,000 living.
1866.....	19.2	14.2	17.3	16.6	11.4	16.1	
1867.....	17.0	15.1	15.0	16.4	10.9	15.6	
1868.....	15.7	13.7	14.7	17.0	10.0	15.7	
1869.....	17.9	16.7	13.2	16.0	12.8	15.6	
1870.....	15.5	13.5	14.1	15.5	12.0	14.9	...17.2 per 1,000 living.
1871.....	16.3	17.5	12.2	15.9	12.3	15.4	
1872.....	21.1	16.1	14.5	21.2	14.7	19.1	
1873.....	18.4	13.8	19.0	22.0	15.1	20.2	
1874.....	14.7	13.2	10.8	17.7	13.7	16.3	
1875.....	14.9	14.9	13.5	17.5	15.5	16.7	...16.6 per 1,000 living.
1876.....	14.7	11.7	13.5	16.8	15.9	15.9	
1877.....	18.2	13.1	12.4	18.7	12.8	17.2	
1878.....	17.5	14.2	13.7	18.3	13.0	17.2	
1879.....	13.2	15.1	14.8	17.2	11.1	16.2	
1880.....	19.2	14.9	14.5	18.5	12.7	17.5	...18.0 per 1,000 living.
1881.....	17.9	16.5	15.7	19.3	11.9	18.1	
1882.....	16.5	15.3	17.2	19.7	11.0	18.4	
1883.....	17.7	14.6	17.7	20.8	9.8	19.1	
1884.....	17.7	17.1	14.5	17.8	12.6	16.9	
1885.....	16.3	16.4	14.5	18.5	14.0	17.7	...19.1 per 1,000 living.
1886.....	19.2	17.5	15.0	19.2	15.0	18.8	
1887.....	18.2	15.5	15.1	21.1	15.5	19.9	
1888.....	21.3	18.4	18.0	21.0	16.0	20.4	
1889.....	17.6	20.1	14.7	19.2	14.6	19.0	
1890.....	22.1	17.6	16.5	22.1	13.5	20.7	

Annual average, thirty years, 1860-188917.3 per 1,000 living.

SEX OF DECEDENTS.

Of the 6,934 persons whose deaths were returned, during the year 1890, 3,501 were males, and 3,433 were females; the ratio standing at 102.0 males to each 100 females, or 504 males and 496 females in every 1,000 decedents.

The following Table will show the number and proportion of males and females among the *decedents* in Rhode Island, during the ten years 1853 to 1862, inclusive; also in each of the twenty-eight years from 1863 to 1890, inclusive, and for the entire period of thirty-eight years:

TABLE XLVIII.

DEATHS.			
	Males.	Females.	Males to every 100 females.
10 years, 1853-1862.....	10,930.....	11,269.....	96.9
1863.....	1,621.....	1,586.....	102.2
1864.....	1,633.....	1,727.....	92.4
1865.....	1,686.....	1,719.....	98.1
1866.....	1,497.....	1,473.....	101.5
1867.....	1,442.....	1,447.....	99.7
1868.....	1,413.....	1,499.....	94.3
1869.....	1,696.....	1,686.....	100.6
1870.....	1,588.....	1,650.....	96.2
1871.....	1,621.....	1,723.....	94.1
1872.....	2,118.....	2,129.....	99.4
1873.....	2,166.....	2,237.....	95.5
1874.....	2,111.....	2,118.....	99.7
1875.....	2,108.....	2,209.....	95.4
1876.....	1,969.....	2,147.....	91.7
1877.....	2,132.....	2,318.....	92.0
1878.....	2,161.....	2,280.....	94.8
1879.....	2,183.....	2,289.....	95.4
1880.....	2,366.....	2,463.....	96.0
1881.....	2,367.....	2,559.....	96.8
1882.....	2,487.....	2,587.....	96.5
1883.....	2,627.....	2,655.....	99.0
1884.....	2,486.....	2,655.....	93.6
1885.....	2,607.....	2,782.....	93.7
1886.....	2,833.....	3,016.....	93.9
1887.....	3,177.....	3,163.....	100.4
1888.....	3,199.....	3,395.....	95.4
1889.....	3,093.....	3,166.....	97.7
1890.....	3,501.....	3,433.....	102.0
38 years.....	72,918.....	75,270.....	96.8

The following Table of *births*, during the same period of time as the preceding, will show by comparison the different proportions of the sexes in the two classes of events :

TABLE XLIX.

BIRTHS.			
	Males.	Females.	Males to every 100 females.
10 years, 1853-62.....	88,377.....	17,260.....	106.4
1863.....	1,892.....	1,788.....	105.8
1864.....	1,949.....	1,942.....	100.3
1865.....	2,096.....	1,857.....	112.9
1866.....	2,546.....	2,356.....	108.0
1867.....	2,655.....	2,464.....	107.0
1868.....	2,745.....	2,627.....	104.5
1869.....	2,685.....	2,560.....	104.9
1870.....	2,679.....	2,536.....	105.6
1871.....	2,878.....	2,800.....	102.8
1872.....	3,065.....	3,058.....	100.9
1873.....	3,135.....	2,887.....	108.6
1874.....	3,311.....	3,155.....	104.9
1875.....	3,362.....	3,146.....	106.9
1876.....	3,291.....	3,038.....	108.3
1877.....	3,163.....	3,072.....	103.0
1878.....	3,402.....	3,312.....	102.7
1879.....	3,259.....	3,091.....	105.4
1880.....	3,241.....	3,054.....	106.1
1881.....	3,498.....	3,263.....	107.2
1882.....	3,509.....	3,316.....	105.8
1883.....	3,548.....	3,498.....	101.4
1884.....	3,713.....	3,592.....	103.4
1885.....	3,591.....	3,437.....	104.4
1886.....	3,897.....	3,724.....	104.6
1887.....	3,968.....	3,700.....	107.2
1888.....	4,023.....	3,817.....	105.4
1889.....	4,193.....	4,027.....	104.1
1890.....	4,351.....	4,199.....	103.2
28 years.....	108,042.....	104,576.....	103.3

SEASON AND MORTALITY.

The whole number of decedents, and the sex of the same, in each month of the year 1890, and in each division of the State, may be found in Table V, on the tenth page.

The influence of season upon mortality may be further illustrated by the following Table, which shows the number and percentage of deaths in each quarter of each of the last five years, and in the aggregate for thirty-seven years, 1853 to 1889, inclusive :

TABLE L.

SEASONS.	1890.		1889.		1888.		1887.		1886.		1853-1889.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
January-March	2,027	29.23	1,563	24.97	1,709	25.92	1,448	22.84	1,413	24.16	31,928	23.63
April-June.....	1,517	20.99	1,426	22.78	1,496	22.69	1,412	22.27	1,297	22.17	28,792	21.31
July-September	1,952	28.15	1,870	29.87	1,911	28.99	1,887	29.76	1,745	29.83	39,087	29.01
Oct-December.	1,438	21.63	1,400	22.38	1,478	22.40	1,593	25.13	1,394	23.84	35,288	26.05
Total.....	6,934	100.00	6,259	100.00	6,594	100.00	6,340	100.00	5,849	100.00	135,095	100.00

Comparing the percentages of 1890 with those of the thirty-seven years, we find the per cent. of the first quarter very much larger ; the second quarter rather less, and the last quarter quite largely less than the same for the average of the thirty-seven years. The greatest mortality for any one season of any year is usually found in the third quarter, but in 1890, owing in large measure to the epidemic of influenza, the first quarter had the largest mortality.

TABLE LI.

Showing the Months in the Order of Largest Mortality, for Eight Years.

1890.	1889.	1888.	1887.	1886.	1885.	1884.	1883.
1. January ... 881	August 667	August 772	July 651	August... .. 644	July 587	August..... .. 552	July 537
2. August..... 715	July 645	July 646	August..... 647	July..... .. 589	August..... 518	October..... 518	August..... 499
3. July..... 691	September..... 558	January..... 615	September. ... 589	March..... .. 515	March..... .. 499	September..... 514	April..... .. 475
4. March. 581	March..... .. 547	March..... .. 582	December..... 554	September..... 512	January..... 492	December..... 457	January..... 455
5. February .. 565	February..... 530	September..... 543	October..... 520	October..... 512	April..... .. 483	July..... .. 456	May 452
6. April 546	April 495	October..... 536	November 519	January..... 488	September..... 470	November. ... 432	October..... 443
7. September.. 546	January..... 486	April 526	March..... .. 517	April..... .. 460	February 442	April..... .. 416	March..... .. 442
8. May..... 519	October..... 484	February. 512	April 517	December..... 454	December..... 404	March 389	September..... 435
9. October.... 516	May 470	May..... .. 509	January..... 490	November..... 428	May..... .. 397	January..... 378	December..... 409
10. December.. 486	December..... 470	December..... 500	May..... .. 457	May..... .. 420	October..... 376	May..... .. 369	June..... .. 401
11. June..... 452	June..... .. 461	June..... .. 461	February..... 441	June..... .. 417	November. ... 364	February..... 344	November..... 392
12. November. 436	November..... 446	November..... 442	June..... .. 438	February..... 410	June..... .. 357	June..... .. 326	February..... 352
—	—	—	—	—	—	—	—
6,934	6,259	6,594	6,340	5,849	5,389	5,141	5,282

PARENTAGE OF DECEDENTS.

The number of decedents, in 1890, of the two general classes of parentage, that is, native and foreign, may be found in Table I, on pages 2-5.

Of the whole number of decedents, 6,934, reported in 1890, 3,010 were of native, and 3,924 were of foreign parentage.

By the term "foreign parentage" is meant the decedents whose fathers were born in some other country and not in the United States. The grandchildren of the foreign born are reckoned as of native parentage, if their fathers were born in the United States.

The following thirteen towns reported a larger number of decedents of foreign parentage than of native, namely: Warren, Warwick, Newport, Tiverton, Burrillville, Cumberland, Johnston, Lincoln, North Providence, North Smithfield, Pawtucket, Providence, and Woonsocket; also the State Institutions at Cranston.

These numbers varied from a moderate excess to six times as many of foreign as of native parentage.

In Lincoln there were 398 of foreign, and 64 of native.

The following Table gives the number and proportion in every one thousand deaths of decedents of native and of foreign parentage, in each of the last five years; and in the aggregate for thirty years, or from 1858 to 1887, inclusive:

TABLE LII.

PARENTAGE.	1890.		1889.		1888.		1887.		1886.		30 years, 1858-1887.	
	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.
Native.....	3,010	434.1	2,806	448.3	3,043	461.5	2,926	461.5	2,747	469.7	73,335	539.4
Foreign.....	3,924	565.9	3,453	551.7	3,551	538.5	3,414	538.5	3,102	530.3	62,619	460.6
Total.....	6,934	1000.0	6,259	1000.0	6,594	1000.0	6,340	1000.0	5,849	1000.0	135,954	1000.0

AGE OF DECEDENTS.

In Table I, on pages 2-5, may be found the aggregate and average age of all the decedents whose deaths occurred in 1890, and with the age of each sex, in each town and county in the State.

By that Table it will be seen that the average age of all the male decedents in the State, in 1890, was 31.04 years, and that the average age of all the female decedents, in the same year, was 34.26 years; the average age of all decedents, of both sexes, 32.62 years.

The average age of the total decedents in the State, in 1890, was one and one-third years less than the average for 1889.

The following Table will present, separately, the average age of the male and female decedents, and the average age of all decedents, in each year for thirty-one years; also the average age in six periods of five years each, from 1860 to 1889, inclusive :

TABLE LIII.

YEARS.	Average Age of Males.	Average Age of Females.	Average Age of All.	Average Age, 5-year periods, 1860-1889.
1860.....	28.51	30.70	29.65	} 29.71
1861.....	26.95	30.58	28.82	
1862.....	29.64	32.65	31.15	
1863.....	28.29	30.86	29.56	
1864.....	28.13	30.43	29.40	} 31.58
1865.....	26.38	28.97	27.69	
1866.....	31.13	35.07	33.09	
1867.....	32.16	35.86	34.01	
1868.....	30.47	35.08	32.85	} 30.90
1869.....	28.62	31.29	30.25	
1870.....	31.02	32.75	31.90	
1871.....	32.57	34.43	33.52	
1872.....	28.41	31.15	29.77	} 31.29
1873.....	26.18	28.62	27.42	
1874.....	28.03	31.66	28.86	
1875.....	29.72	32.75	31.27	
1876.....	31.47	33.21	32.37	} 33.24
1877.....	29.25	31.56	30.45	
1878.....	29.02	31.11	30.09	
1879.....	31.29	33.24	32.29	
1880.....	29.62	32.06	30.86	} 33.81
1881.....	30.99	34.07	32.55	
1882.....	31.33	35.57	33.50	
1883.....	33.64	37.44	35.55	
1884.....	32.29	35.12	33.76	} 33.81
1885.....	33.53	35.60	34.59	
1886.....	33.02	34.91	34.01	
1887.....	30.97	32.01	31.95	
1888.....	33.17	35.74	34.53	} 33.81
1889.....	32.20	35.74	34.00	
1890.....	31.04	34.26	32.62	

The above table shows that the average longevity of the decedents in Rhode Island increased over three years, during a period of twenty-

five years, ending with 1884, and of over four years increase, as the average of the five years preceding 1890.

The following Table will present some of the facts of the preceding as occurring in the different divisions of the State, as well as of the State at large. It will show the average age of the decedents in each of the larger divisions of the State, in each of the last four years, and also the average of each of six periods of five years each, comprising the thirty years from 1858 to 1887, inclusive :

TABLE LIV.

DIVISIONS OF THE STATE.	1890.	1889.	1888.	1887.	1883-1887, 5 years.	1878-1882, 5 years.	1873-1877, 5 years.	1868-1872, 5 years.	1863-1867, 5 years.	1858-1862, 5 years.
Bristol County.....	42.17	37.84	35.53	33.20	38.45	36.68	33.61	35.12	34.78	35.56
Kent County.....	31.01	29.89	32.78	39.15	37.66	37.11	36.20	34.77	35.81	32.15
Newport County.....	39.66	43.26	39.93	37.15	42.41	39.21	40.68	40.04	33.54	35.01
*Providence County.....	31.00	32.00	30.49	29.60	31.83	30.60	28.46	25.26	29.16	28.44
Providence City.....	31.86	32.97	34.83	30.00	32.19	29.50	27.19	25.45	28.50	25.78
Washington County.....	44.67	48.52	44.37	40.70	43.39	41.01	41.14	39.67	30.87	34.21
Whole State.....	32.62	34.00	34.53	31.95	33.97	31.86	30.28	31.66	30.73	29.42

PERCENTAGE OF DECEDENTS BY DIFFERENT AGES.

In Table VI, on pages 12 to 17, inclusive, will be found the number of deaths in 1890, in each town and each county, of each sex, and in each period of life, with the percentage of the whole number of deaths in each division to the population of the same by the census of 1890.

The following Table shows the percentages of decedents in each division of ages, to whole number of deaths, in each of the last seven years, and in the aggregate for two periods ; one of twenty years and seven months, from June 1st, 1852, to December 31st, 1872, inclusive ; and one of ten years, from 1873 to 1882, inclusive :

* Exclusive of Providence City.

TABLE LV.

PERIODS OF LIFE.	1890.	1889.	1888.	1887.	1886.	1885.	1884.	10 years, 1873 to 1882.	20 years, 7 months, 1852 to 1872.
Under 1 year.....	22.6	21.0	19.3	19.6	19.9	18.8	20.1	18.9	17.8
1 and under 2.....	5.8	5.9	5.9	6.6	5.3	5.2	5.6	7.6	8.8
2 and under 5.....	5.7	5.4	6.6	8.2	6.5	6.1	6.6	8.4	8.7
Total under 5.....	34.1	32.3	31.8	34.4	31.7	30.1	32.3	34.9	35.3
5 and under 10.....	3.2	3.6	4.2	5.2	4.0	3.3	3.5	5.0	4.8
10 and under 20.....	4.5	5.4	5.7	5.1	5.5	5.6	4.8	5.8	6.0
20 and under 30.....	8.4	8.3	9.0	7.6	8.7	8.6	9.2	9.2	9.6
30 and under 40.....	8.3	7.5	7.5	7.0	7.5	7.9	8.1	7.8	8.4
40 and under 50.....	7.5	7.9	7.9	6.7	7.4	7.7	7.2	6.9	7.3
50 and under 60.....	8.5	8.3	8.4	8.0	8.1	8.1	8.1	7.2	7.0
60 and under 70.....	9.3	9.8	9.5	9.9	9.1	10.4	9.1	8.2	7.6
70 and under 80.....	9.6	10.1	9.0	9.2	10.6	10.4	9.5	8.6	7.8
80 and under 90.....	5.5	5.6	5.6	5.3	5.3	6.2	6.9	5.1	5.1
Over 90 and not stated.....	1.1	1.2	1.4	1.6	2.1	1.7	1.3	1.1	1.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Compared with the previous year, the proportion of decedents in 1890, under one year of age, was more than one and one-half in every hundred larger, and of all under five years of age the proportion was nearly two in every one hundred larger.

The proportion under one year is larger than any year found on record.

In the division of ages of five years and over, the proportions do not vary very much from the average of the last eight years.

The following Table will present the varying proportions of deaths to whole number of deaths, in four different periods of life, from 50 years of age to 90 years, grouped in three periods of averages of ten years each, and one period comprising the eight years, 1883-1890 :

TABLE LVI.

AGE OF DECEDENTS.	1st Decade, 1852-1862.	2d Decade, 1863-1872.	3d Decade, 1873-1882.	8 Years, Ending 1890.
50 to 60	6.7 per cent.	7.3 per cent.	7.2 per cent.	8.1 per cent.
60 to 70	6.9 "	8.3 "	8.2 "	9.3 "
70 to 80	7.3 "	8.4 "	8.8 "	9.5 "
80 to 90	4.6 "	5.4 "	5.1 "	5.6 "

COLORED DECEDENTS.

There were 202 deaths of persons of color during 1890.

The towns from which they were returned, and number in each, were as follows :

Providence City.....	133
Newport City.	20
Cranston (State Institutions)	8
East Greenwich.....	7
South Kingstown.....	6
East Providence.....	5
Warwick.....	4
New Shoreham	3
Bristol,	} 2 each..... 12
Narragansett,	
North Kingstown,	
Westerly,	
Lincoln,	
Pawtucket,	} 1 each..... 4
Little Compton,	
Burrillville,	
Cranston (Town),	
North Smithfield,	
Total	202

Sex.—Of the decedents of color, 90 were males, and 112 were females.

Season.—The deaths were in the different months as follows:

Months.	Deaths.	Months.	Deaths.	Months.	Deaths.	Months.	Deaths.
January.....	25	April.....	21	July.....	14	October.....	10
February.....	11	May.....	17	August.....	26	November.....	7
March.....	21	June.....	19	September.....	13	December.....	18
—	—	—	—	—	—	—	—
First Quarter.....	57	Second Quarter.....	57	Third Quarter.....	53	Fourth Quarter.....	35

First six Months, 114; Second six Months, 88; Total, 202.

The following summary will show the proportion, to the whole estimated colored population, of each of the events of birth, marriage and death of colored persons, during the thirteen years from 1878 to 1890, inclusive:

	One Birth in every	One Person married in every	One Death in every
1878.....	36.4	39.2	40.2
1879.....	39.6	51.4	37.3
1880.....	47.1	43.3	44.0
1881.....	34.3	39.2	35.4
1882.....	36.8	44.5	45.4
1883.....	33.4	63.3	39.7
1884.....	34.8	46.0	34.5
1885.....	36.7	51.7	40.1
1886.....	34.6	43.2	37.8
1887.....	35.8	38.9	37.2
1888.....	37.6	55.0	38.0
1889.....	38.7	52.0	40.0
1890.....	45.3	57.6	41.0

In every one thousand of the colored population there were, in 1890,

Of Births.	Of Persons Married.	Of Deaths.
22.1	17.3	21.4

The following exhibit will show the number of living births, marriages and deaths among the colored population of Rhode Island, during 10 years, from 1861 to 1870, inclusive; 10 years, from 1871 to 1880, inclusive; and for the last ten years, from 1881 to 1890, inclusive, and the aggregate of the same:

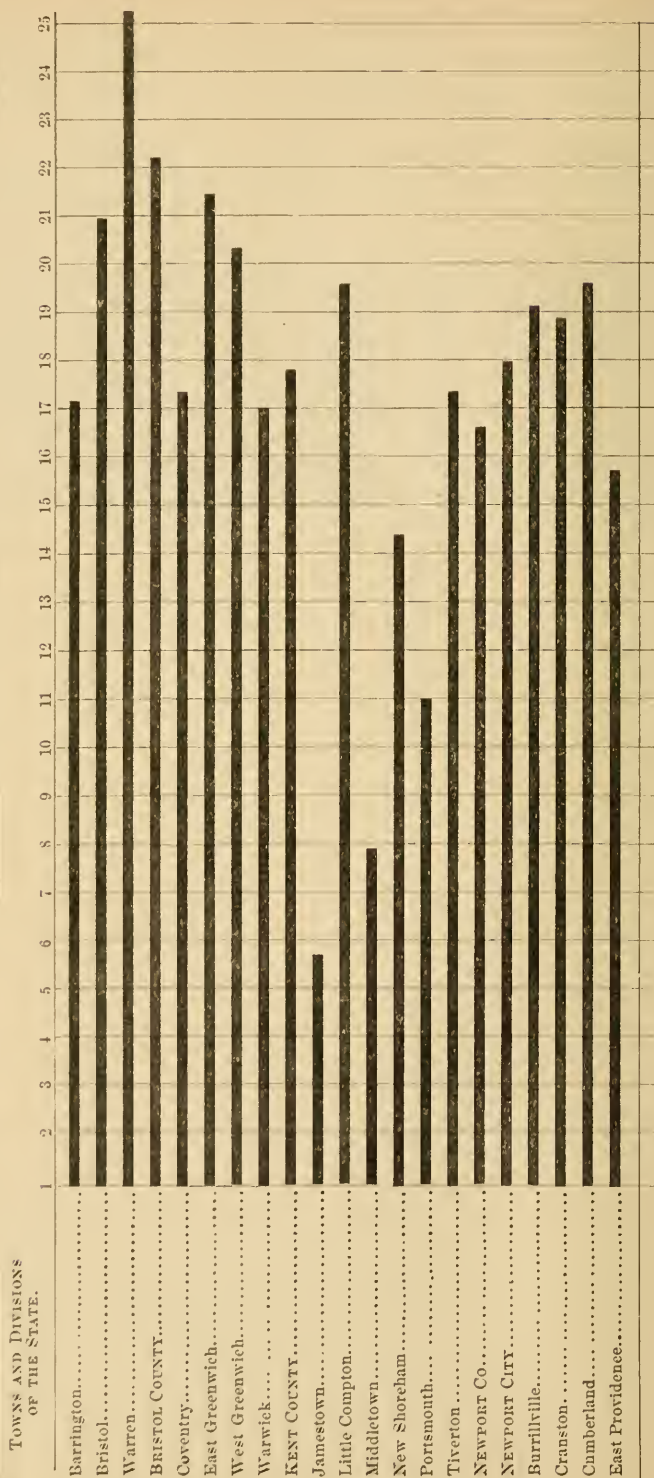
10 years, 1861-1870.....	1,131 births.....	557 marriages.....	1,153 deaths.
10 years, 1871-1880.....	1,615 births.....	705 marriages.....	1,573 deaths.
10 years, 1881-1890.....	1,954 births.....	752 marriages.....	1,860 deaths.
<hr/>			
Total, 30 years.....	4,700 births.....	2,014 marriages.....	4,586 deaths.
<hr/>			
Excess of births over deaths during the last thirty years.....			114

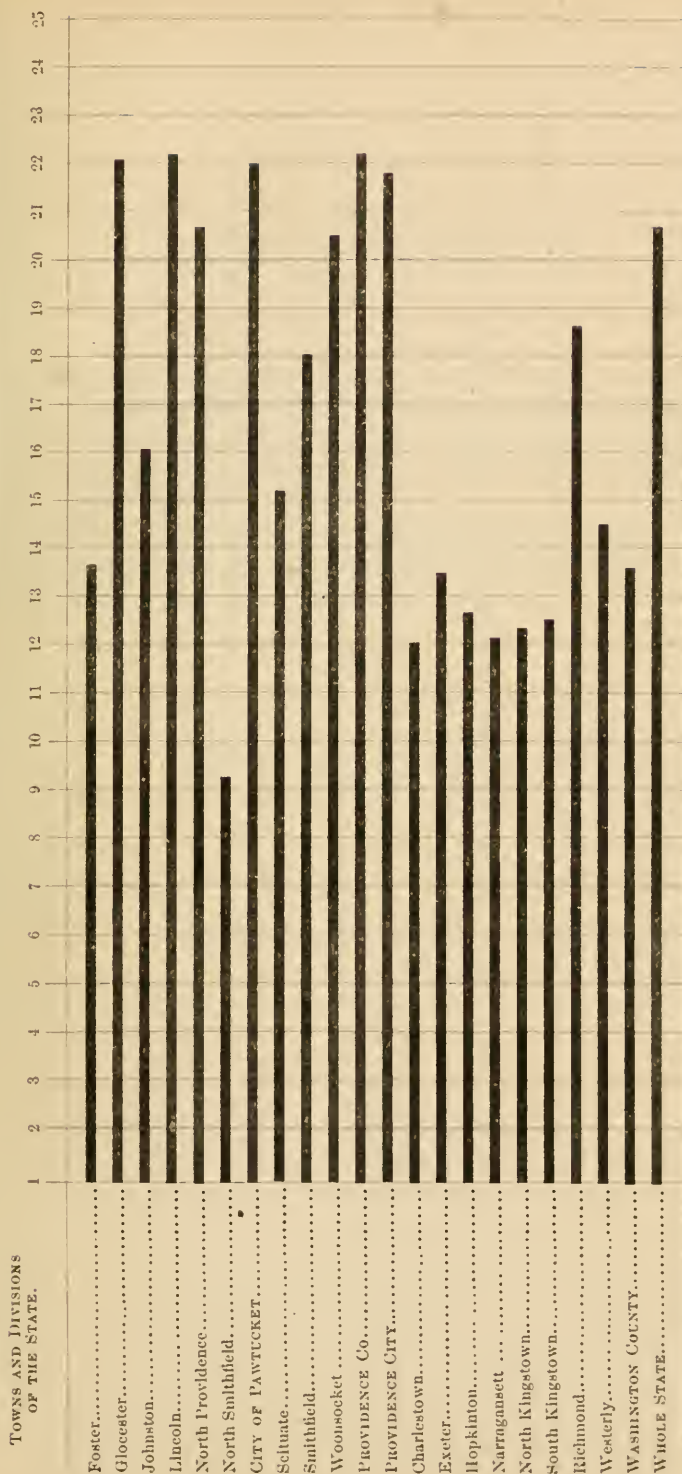
During the first ten years (1861-1870) there were twenty-two more deaths than births; during the second ten (1871-1880) forty-two more births than deaths; during the last ten years (1881-1890) ninety-four more births than deaths. For the whole thirty years there was an average excess of less than four births a year over the deaths. For the last ten years the excess of births over the deaths have averaged less than ten per year. During the last year the number of births was nineteen less than the deaths. Still-born not included with births nor deaths.

DEATH RATES.

Diagram II.—Showing the number of deaths in every 1000 of the population, in each town and each county in the State during the year 1890, computed upon the population by the Census of 1890.

For explanation see foot note on next page.





The figures at the top of the perpendicular lines indicate, in whole numbers, the number of deaths during the year in every 1000 persons. The spaces are fractional parts of one. For instance, the heavy horizontal line against Barrington, the top of this diagram, reaches across about one-tenth of the space between the perpendicular lines 17 and 18. It shows the death rate of Barrington, in 1890, was about seventeen and one-tenth in every 1000 of the population.

CAUSES OF DEATH, 1890.

The statistics of the causes of death in Rhode Island, in 1890, may be found in Tables VII, VIII, IX and X. The whole number of deaths, as previously stated, was 6,934. The number of which the cause of death was reported was 6,891, and the number of which the cause was not stated was 43.

The following Table shows the number of deaths in 1890, in each large division of the State, and the number and proportion in each division from which causes were reported unknown :

TABLE LVII.

1890.	Bristol County.	Kent County.	Newport County Towns.	Providence County Towns.	Washington County.	Newport City.	Pawtucket.	Providence City.	Woonsocket.	Whole State.
Number of Deaths.....	253	470	124	1,511	318	348	606	2,876	428	6,934
Cause not stated.....	.....	.....	2	18	2	.....	1	17	3	43
One in.....	.....	.....	62	84	159	.....	606	190	143	161

TABLE LVIII.

Proportion of Deaths reported with "Cause Unknown" in each Division of the State, for a period of thirty-six years, from 1855 to 1890, inclusive.

YEARS.	STATE DIVISIONS.							In every 1000 Deaths.
	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.	Whole State.	
1855-1859, One in every.....	19.8	7.6	15.4	5.8	34.3	5.3	9.0	111.1
1860-1864, One in every	25.7	10.6	17.8	8.1	35.3	25.1	14.7	68.0
1865-1869, One in every	60.2	12.6	28.7	7.1	58.8	21.3	14.0	71.4
1870-1874, One in every	43.7	27.5	16.2	10.8	84.6	19.0	19.2	52.1
1875, One in every.....	55.0	7.4	15.6	13.7	91.2	11.9	20.9	47.8
1876, One in every.....	11.5	7.9	18.5	9.9	124.3	22.8	19.3	45.8
1877, One in every.....	201.0	17.7	9.7	11.9	323.0	16.0	23.2	43.1
1878, One in every.....	32.1	7.4	9.0	13.7	124.2	21.7	21.1	47.4
1879, One in every.....	16.6	9.2	12.4	9.5	225.1	8.6	17.6	56.8
1875-1879, One in every	63.2	9.9	13.0	11.7	177.6	16.2	20.4	49.0
1880, One in every.....	21.9	23.5	13.5	10.5	122.3	17.8	20.7	48.3
1881, One in every.....	204.0	13.0	11.2	7.3	143.0	6.5	14.4	69.4
1882, One in every.....	37.6	11.6	10.9	10.6	187.0	7.7	18.8	53.2
1883, One in every.....	40.4	15.9	15.0	15.3	392.8	17.0	28.4	36.2
1884, One in every.....	100.0	40.0	81.6	91.7	372.1	94.0	122.4	8.2
1880-1884, One in every	80.8	20.8	26.4	27.1	243.4	28.6	40.9	24.5
1885, One in every.....	185.0	355.0	137.0	45.6	309.1	52.2	91.3	10.9
1886, One in every.....	110.5	192.5	86.0	87.0	195.1	55.2	113.7	7.9
1887, One in every.....	212.0	343.0	73.5	782.6	264.0	351.0	333.7	3.0
1888, One in every.....	251.0	408.0	152.7	161.3	293.8	368.0	235.7	4.3
1889, One in every.....	208.0	152.0	221.0	176.7	120.0	338.0	160.0	6.2
1885-1889, One in every	433.5	389.0	134.0	251.2	236.4	233.0	168.8	6.4
1890, One in every.....	.....	.....	226.0	109.0	190.0	159.0	161.0	6.2

* Not including Providence City.

TABLE LIN.

Exhibiting the Order in regard to Number and Proportion of Decedents from Thirteen Principal Causes of Death.

1890.	1889.	1888.	1887.	1886.	1885.	June 1st, 1852, to Dec. 31st, 1882—30 yrs. 7 mos.	Per 1000 of Whole No. of Deaths, 30 years, 7 months.
Whole Number...6,934	Whole Number...6,259	Whole Number...6,594	Whole Number...6,340	Whole Number...5,849	Whole Number...5,389	Whole Number...101,230	
Consumption.....852	Consumption.....737	Consumption.....800	Consumption.....710	Consumption.....826	Consumption.....781	Consumption.....16,025	138.
Cholera Infantum...582	Pneumonia.....483	Pneumonia.....508	Pneumonia.....488	Pneumonia.....481	Pneumonia.....467	Pneumonia.....6,099	60.2
Pneumonia.....569	Heart, Diseases of...400	Cholera Infantum...467	Brain, Diseases of...440	Cholera Infantum...377	Heart, Diseases of...349	Old Age.....5,408	53.4
Heart, Diseases of...405	Cholera Infantum...396	Heart, Diseases of...436	Heart, Diseases of...406	Apoplexy and Paralysis.....333	Paralysis.....289	Cholera Infantum 5,143	50.8
Apoplexy.....341	Apoplexy and Paralysis.....323	Cholera Infantum...367	Cholera Infantum...355	Heart, Diseases of...330	Cholera Infantum...279	Scarlatina.....4,398	43.4
Bronchitis.....275	Bronchitis.....260	Old Age.....290	Apoplexy and Paralysis.....328	Old Age.....276	Old Age.....267	Dysentery and Diarrhoea.....4,310	41.5
Accidents.....250	Old Age.....237	Brain, Diseases of...234	Diphtheria.....287	Diphtheria.....228	Brain, Diseases of...189	Heart, Diseases of 3,947	39.0
Kidney, Dis. of...229	Accidents.....216	Fever, Typhoid...216	Old Age.....278	Accidents.....193	Cancers.....193	Fever, Typhoid, &c.....3,755	37.1
Brain, Diseases of...217	Kidney, Diseases of...210	Bronchitis.....228	Scarlatina.....266	Brain, Diseases of...182	Accidents.....173	Apoplexy and Paralysis.....3,527	31.8
Diphtheria.....211	Cancer.....189	Kidney, Diseases of...213	Accidents.....206	Bronchitis.....174	Fever.....174	Accidents, all kinds.....3,018	30.8
Old Age.....198	Brain, Diseases of...189	Scarlatina.....207	Bronchitis.....176	Fever.....169	Diarrhoea and Dysentery.....130	Diphtheria*.....2,949	*29.1
Influenza.....168	Diphtheria.....154	Cancer.....193	Kidney, Diseases of...169	Cancers.....162	Diphtheria.....99	Convulsions and Fits.....2,203	21.7
Cancer.....165	Diarrhoea and Dysentery.....159	Diphtheria.....191	Cancers.....159	Kidneys, Disease of...155	Scarlet Fever.....91	Croup.....2,013	19.8

* 25 years, 1858 to 1882, inclusive.

There was an increase of deaths from consumption of 125, or about 17 per cent. over the previous year. The epidemic of influenza doubtless developed the disease in a considerable number originally predisposed, who might otherwise have escaped.

Cholera infantum had an extensive prevalence during the warmer season of 1890, and the mortality from that disease was an increase of 186 deaths over that of the previous year, an excess of nearly 50 per cent.

From pneumonia there was an increase of mortality of about 17 per cent., corresponding closely with that of consumption, and doubtless caused largely by the same influences.

An increase of mortality beyond the average increase of population will be noticed as having occurred from the following important diseases, viz.: Apoplexy, diphtheria, and diseases of the brain, while there was a decided falling off in the mortality from diseases of the heart and cancer, and the mortality from scarlet fever was so small as to find no place in the Table.

COMPARATIVE STATISTICS

AND

COMMENTS.

In the preceding pages there have been presented, numerically and in tabular form, the various causes of death in Rhode Island, in 1890. In Tables VII and VIII they were presented at considerable length, in various specific terms; in Table IX more or less grouped in a general nosological arrangement; and in Table X the same for a period of thirty-seven years.

In Table VII the number of deaths from *each cause* and of *each sex* is shown, for *each month* in the year, and the *parentage* of the decedents from *each cause* during the year.

In Table VIII the number of decedents of *each sex* from *each cause*, in the *different periods of life* is given.

In Table IX, with the classification and percentage of causes of death, the number of each general cause, in each division of larger population, is given.

In Table X a nosological summary of causes of death for the whole State, in each of thirty-seven years, is given.

Table LX is a compend in part of Tables VII, VIII and IX previously alluded to, and contains the particulars of the most important causes of death in 1890, and comprise the principal causes which will be commented upon in the following pages :

TABLE LX.

Deaths in Rhode Island from Twenty-three Principal Causes, 1890.

	Accidents.	Apoplexy and Paralysis.	Brain Diseases.	Bronchitis.	Cancer.	Cholera Infantum.	Consumption.	Croup.	Diarrhea.	Diphtheria.	Dysentery.	Enteritis.	Fever, Typhoid.	Heart Diseases.	Influenza.	Kidney Diseases.	Liver Diseases.	Measles.	Old Age.	Peritonitis.	Pneumonia.	Stomach Diseases.	Whooping Cough.
Total Mortality.....	250	341	217	275	165	582	852	83	95	211	87	63	107	405	168	229	65	92	198	63	569	73	70
MALES.	199	168	113	140	56	282	422	53	48	112	36	29	58	222	72	116	42	45	72	24	288	28	25
FEMALES.	51	173	104	135	109	300	430	30	47	99	51	34	49	183	96	113	23	47	126	39	281	45	45
NATIVE.	99	206	119	116	92	202	280	28	34	93	40	25	39	219	68	109	29	42	123	28	247	31	25
FOREIGN.	151	135	98	159	73	380	572	55	61	118	47	38	68	186	100	120	36	50	75	35	322	42	45
JANUARY.	18	42	11	42	16	4	107	11	3	22	4	6	9	50	108	23	8	16	29	6	134	11	10
FEBRUARY.	14	30	21	21	14	3	61	12	2	23	1	3	5	34	27	12	4	20	19	2	63	4	11
MARCH.	14	23	23	26	18	6	84	12	6	17	2	5	11	41	11	21	1	19	26	9	70	4	11
APRIL.	12	29	29	30	13	6	66	6	5	23	4	2	6	41	8	16	4	25	20	4	59	4	7
MAY.	22	31	13	39	12	2	81	4	4	17	...	4	2	30	4	8	5	8	14	5	47	12	6
JUNE.	20	22	22	20	12	21	64	3	6	13	...	4	7	24	2	20	3	3	11	3	25	4	7
JULY.	25	37	20	11	11	183	74	3	15	12	16	8	7	32	2	19	9	1	17	5	17	8	5
AUGUST.	38	23	19	11	9	217	67	2	22	19	31	8	10	24	...	13	4	10	11	4	11	6	6
SEPTEMBER.	21	31	9	8	10	90	57	5	15	21	19	8	19	26	1	22	7	...	15	7	12	8	4
OCTOBER.	23	22	13	16	14	40	73	14	12	21	7	8	8	33	3	20	6	...	13	4	29	4	1
NOVEMBER.	15	28	17	13	22	6	63	5	3	12	2	1	13	38	1	23	6	...	18	11	33	4	2
DECEMBER.	28	23	20	28	14	4	55	6	2	11	1	6	10	32	1	22	8	...	11	3	69	4	...

TABLE LX.—CONTINUED.

LOCALITIES.	Ages.	CAUSES OF DEATH.																						
		Accidents.	Apoplexy and Paralysis.	Brain Diseases.	Bronchitis.	Cancer.	Cholera Infantum.	Consumption.	Croup.	Diarrhoea.	Diphtheria.	Dysentery.	Enteritis.	Fever, Typhoid.	Heart Diseases.	Influenza.	Kidney Diseases.	Liver Diseases.	Measles.	Old Age.	Peritonitis.	Pneumonia.	Stomach Diseases.	Whooping Cough.
{	Under 5 years.....	35	5	99	138	1	582	37	70	58	123	30	32	6	12	32	7	5	80	.....	5	161	19	65
	5 to 10.....	18	.....	20	2	.....	.....	5	13	.....	65	4	2	7	1	4	3	.....	3	.....	6	10	2	5
	10 to 15.....	12	.....	8	1	.....	.....	17	.....	.....	15	.....	1	11	8	2	6	.....	3	.....	3	7	1	.....
	15 to 20.....	17	2	7	1	.....	.....	69	.....	.....	4	9	2	13	13	6	1	.....	2	.....	1	12	2	.....
	20 to 30.....	35	5	14	10	2	.....	251	.....	.....	2	3	2	35	15	14	17	3	3	.....	14	46	1	.....
	30 to 40.....	39	13	13	7	15	.....	198	.....	2	.....	3	2	4	24	22	26	5	5	.....	9	55	4	.....
	40 to 50.....	20	29	7	11	32	.....	111	.....	4	1	4	4	5	53	18	41	11	3	.....	3	55	8	.....
	50 to 60.....	29	52	11	14	47	.....	91	.....	2	.....	6	4	6	69	17	46	13	8	.....	11	55	13	.....
	60 to 70.....	25	84	14	33	38	.....	42	.....	11	1	7	4	6	78	19	43	15	.....	7	79	9	.....
	70 to 80.....	14	100	18	55	22	.....	23	.....	7	.....	15	8	4	96	17	30	10	.....	52	3	54	14	.....
{	80 and over.....	5	50	5	23	8	.....	8	.....	6	.....	13	2	.....	36	16	9	3	.....	139	.....	23	.....	.....
	Not stated.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	2	.....	.....
	Bristol County.....	7	21	7	5	14	19	31	2	3	1	2	2	7	15	6	15	3	2	16	4	16	3	2
	Kent County.....	17	21	13	4	10	57	38	14	5	9	4	3	8	49	14	8	4	10	19	3	36	12	2
	Newport County Towns.....	7	8	6	3	1	11	9	.....	1	3	2	3	3	6	4	4	1	.....	6	.....	2	.....	.....
	Newport City.....	17	15	11	12	12	22	42	2	4	13	15	1	2	21	8	17	5	.....	13	4	22	3	7
	Providence County Towns.....	48	69	49	64	28	138	173	21	27	53	21	10	26	62	30	41	11	24	38	10	114	18	18
	Pawtucket.....	10	26	25	29	13	42	59	7	14	24	6	6	4	33	21	15	7	15	17	7	69	4	4
	Providence City.....	111	144	85	138	74	249	394	31	33	94	30	28	43	172	20	116	26	31	63	30	246	26	30
	Woonsocket.....	17	15	16	14	5	65	73	4	5	9	4	5	7	19	10	3	3	2	22	4	23	2	5
	Washington County.....	16	22	5	6	8	19	23	2	3	5	3	5	7	28	5	10	5	3	22	3	35	2	2

DEATHS FROM ACCIDENTS.

The number of deaths from accidental causes of all kinds, reported in Rhode Island, in 1890, was 250. This number is 34 more than during 1889.

Among the 250 deaths from accident there were 12 from asphyxia ; 20 from burns and scalds ; 71 from drowning ; 32 from falls ; 26 from fractures and contusions of various kinds ; 11 from poison ; 31 from accidents of various forms on railroads ; and 47 from numerous other accidental circumstances.

Of the whole number of deaths by accident 199 were males and 51 were females ; 99 were of native, and 151 were of foreign parentage.

Of the sexes the proportion was 67.0 per cent. of male decedents to 33.0 per cent. of female decedents.

Of parentage, 67 per cent. was of foreign, and 33 per cent. of native.

The number of deaths in each division of the year was as follows:

First Quarter.....	46	Third Quarter.....	84
Second Quarter	54	Fourth Quarter.....	66
	—		—
First half.....	100	Second half.....	150
Whole Year.....	250.		

In regard to periods of life, the decedents from accidental causes were divided as follows : Under 5 years, 35 ; 5 and under 10, 18 ; between 10 and 20, 29 ; between 20 and 40, 74 ; between 40 and 60, 49 ; over 60, 44 ; and 1, age not stated.

In regard to sectional divisions of the State, 7 of the deaths from accidental causes were in Bristol county ; 17 in Kent county ; 24 in Newport county ; 16 in Washington county, and 186 in Providence county.

The whole number of deaths from accidental causes, in 1890, *in proportion to the whole number of deaths* from specified causes, in the State, was about 36 in every one thousand.

In the following Table may be found the number, sex, parentage and locality of mortality from accidents, for twenty-six years, ending December 31, 1890 :

TABLE LXI.

Mortality in the State from Accidents, with the Percentage of the Whole Number of Deaths; Sex, Parentage, and Locality, for twenty-six years, from 1865 to 1890, inclusive, in three periods of five years each, and for each of the last eleven years.

YEARS.	Whole Number.	VARIETIES.								Per cent.	SEX.		PARENT-AGE.		STATE DIVISIONS.					
		Burns and Scalds.	Drowning.	Falls.	Fractures and Contusions.	Poisoning.	Railroad.	Suffocation.	Various and Unspecified.		Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
5 years, 1865-1869.	515	81	114	70	..	14	32	1	203	3.31	397	118	245	270	26	36	52	192	166	43
5 years, 1870-1874.	612	73	159	89	..	17	68	10	196	3.16	493	119	284	328	22	45	49	219	233	44
5 years, 1875-1879.	658	71	168	75	..	31	52	19	242	3.02	487	171	283	375	20	45	50	192	303	48
1880.....	146	21	33	14	..	5	18	..	55	3.02	108	38	57	89	5	17	10	39	71	4
1881.....	155	16	29	19	..	9	20	19	43	3.09	107	48	62	93	5	17	12	60	56	5
1882.....	178	17	40	31	..	6	16	8	60	3.50	130	48	72	106	5	9	15	60	80	9
1883.....	153	18	27	21	..	6	16	12	53	2.83	117	36	61	92	4	8	9	63	66	3
1884.....	197	20	41	31	..	7	16	11	71	3.82	147	50	90	107	5	19	14	65	76	18
5 years, 1880-1884.	829	92	170	116	..	33	86	50	282	3.26	609	220	342	487	24	70	60	287	349	39
1885.....	173	19	42	25	..	9	15	9	54	3.20	135	38	72	101	5	6	8	58	83	13
1886.....	190	23	58	19	..	6	20	9	55	3.25	141	49	84	106	16	11	16	62	72	13
1887.....	206	17	39	17	23	7	24	14	65	3.21	158	48	92	114	5	11	23	81	71	15
1888.....	190	27	16	18	8	12	25	8	46	2.87	145	45	63	127	4	6	14	70	88	8
1889.....	216	20	52	31	25	7	23	9	46	4.10	146	70	88	128	2	14	13	73	101	13
5 years, 1885-1889.	975	106	237	110	56	41	107	49	266	3.55	725	250	399	576	32	48	74	344	415	62
1890.....	250	20	71	32	26	11	31	12	47	3.60	199	51	99	151	7	17	24	75	111	16
Total, 26 years....	3839	443	919	492	82	147	376	141	1236	3.27	2910	929	1652	2187	131	261	309	1309	1577	252

* Exclusive of Providence city.

TABLE LXII.

Mortality in the State from Alcoholism, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality, for twenty-six years, from 1865 to 1890, inclusive.

YEARS.	Number of Deaths from Alcoholism.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
5 years, 1865-1869.	55	.38	48	7	27	28	1	4	5	12	29	4
5 years, 1870-1874.	93	.51	74	19	40	53	4	7	9	33	37	3
5 years, 1875-1879.	81	.39	56	25	27	54	2	4	7	17	48	3
1880.....	15	.32	9	6	5	10	1	.....	1	4	8	1
1881.....	24	.51	17	7	5	19	1	.....	1	7	14	1
1882..	28	.58	16	12	8	20	.....	.....	.....	9	18	1
1883.....	29	.54	17	12	7	22	.....	1	1	10	16	1
1884.....	27	.53	19	8	10	17	.....	1	4	9	12	1
1880-1884	123	.50	78	45	35	88	2	2	7	39	68	5
1885.....	22	.41	16	6	6	16	2	1	.....	11	7	1
1886.....	12	.20	9	3	2	10	1	.....	1	3	7	.....
1887.....	16	.25	14	2	4	12	2	2	2	5	4	1
1888.....	16	.32	10	6	5	11	.....	.....	2	5	9	...
1889.....	31	.50	23	8	12	19	2	1	1	13	14	.....
1885-1889	97	.34	72	25	29	68	7	4	6	37	51	2
1890.....	25	.37	20	5	8	17	2	.....	.....	11	11	1
Total, 26 years....	474	.40	348	126	166	308	18	21	34	149	234	18

* Pawtucket and Woonsocket included.

APOPLEXY AND PARALYSIS.

There were 341 deaths from apoplexy and paralysis in Rhode Island, in 1890, according to the returns. The number reported is 18 more than in the year 1889.

Of the sexes, there were 168 males and 173 females.

Of parentage, 206 were of native parentage, and 135 of foreign.

The older native population has steadily been, in a very large proportion, more prone to apoplexy than the foreign, or the children of the foreign population.

The following Table will present the sex, parental and local relations of apoplexy and paralysis, as causes of death, during the last twenty-six years : (Providence city not included in the Providence county statement.)

TABLE LXIII.

Mortality in the State from Apoplexy and Paralysis, 1865 to 1890, inclusive.

YEARS.	Total Deaths for Year.	Number from Apoplexy and Paralysis.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
				Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.	Providence City.	Washington County.
1865.....	3,405	100	2.93	52	48	81	19	9	8	14	23	38	8
1866.....	2,970	92	3.09	46	46	80	12	8	5	17	24	29	9
1867.....	2,889	124	4.29	59	65	101	23	9	9	13	35	49	9
1868.....	2,912	111	3.81	56	55	86	25	9	6	19	27	46	4
1869.....	3,382	117	3.46	55	62	92	25	12	13	18	20	48	6
1865-1869.	15,558	544	3.48	268	276	440	104	47	51	81	129	210	36
1870.....	3,238	130	4.32	68	62	105	25	14	10	10	39	52	5
1871.....	3,344	156	4.66	73	83	113	43	10	17	15	49	61	13
1872.....	4,247	125	2.97	62	63	96	29	17	9	10	27	52	10
1873.....	4,403	134	3.04	59	75	109	25	9	8	17	26	57	17
1874.....	4,229	156	3.69	84	72	120	36	14	10	16	42	59	15
1870-1874.	19,461	701	3.60	346	355	543	148	64	54	68	174	281	60
1875.....	4,317	166	3.61	79	87	133	33	7	13	17	46	75	8
1876.....	4,116	165	4.01	79	86	130	35	13	11	13	45	68	15
1877.....	4,450	181	4.07	87	94	123	58	10	10	16	52	74	19
1878.....	4,441	188	4.23	104	84	145	43	12	16	21	58	66	15
1879.....	4,472	220	4.92	114	106	146	74	12	9	29	71	89	10
1875-1879.	21,796	920	4.22	463	457	677	243	54	59	96	272	372	67
1880.....	4,829	215	4.67	109	106	157	58	18	13	22	71	78	13
1881.....	5,016	214	4.86	116	128	170	74	17	15	25	70	101	16
1882.....	5,074	265	5.22	139	126	168	97	15	29	21	65	117	15
1883.....	5,282	275	5.22	138	137	192	83	11	28	22	75	118	21
1884.....	5,141	298	5.80	125	163	176	122	21	14	28	108	105	22
1880-1884.	25,342	1,297	5.12	637	660	863	434	82	99	121	389	519	87
1885.....	5,389	289	5.38	144	145	183	106	16	18	28	99	110	18
1886.....	5,819	333	5.70	173	160	230	103	11	27	32	108	120	35
1887.....	6,340	328	5.17	161	167	213	115	21	27	23	101	128	28
1888.....	6,591	367	5.41	164	203	231	133	29	26	29	113	137	33
1889.....	6,259	323	5.17	140	183	201	119	23	32	28	101	106	33
1885-1889.	30,431	1,610	5.39	782	858	1,064	576	100	130	140	522	601	147
1890.....	6,934	341	4.91	168	173	206	135	21	21	23	110	144	22

Table LXIII shows a large proportional as well as actual increase of deaths from apoplexy and paralysis, during the twenty-six years.

The proportions, however, have not varied very much during the last eight or nine years.

TABLE LXIV.

Ages of Decedents from Apoplexy and Paralysis, in each of the last twenty-six years.

APOPLEXY AND PARALYSIS.	PERIODS OF LIFE.							
	Under 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.
1865.....	...	3	5	6	19	20	28	19
1866.....	1	1	7	16	9	24	27	7
1867.....	2	.....	6	6	15	38	40	17
1868.....	2	3	3	11	16	27	31	16
1869.....	1	1	5	12	20	28	34	15
1870.....	4	1	10	9	12	33	41	20
1871.....	3	4	7	14	21	46	45	15
1872.....	1	4	5	17	20	26	41	11
1873.....	2	3	4	14	22	35	37	16
1874.....	1	2	9	9	30	39	40	25
1875.....	6	2	8	19	23	40	45	22
1876.....	4	4	4	13	25	43	49	23
1877.....	1	2	9	12	24	50	61	22
1878.....	4	2	7	14	41	40	53	26
1879.....	4	6	11	18	27	57	59	38
1880.....	1	2	8	18	21	59	70	34
1881.....	1	7	11	20	36	55	70	42
1882.....	4	5	14	28	41	57	77	38
1883.....	8	4	11	19	45	56	83	49
1884.....	10	7	16	21	32	68	95	45
1885.....	8	5	7	25	29	76	94	44
1886.....	7	8	10	25	52	65	112	51
1887.....	12	6	13	26	50	90	96	9
1888.....	10	4	18	29	61	85	100	8
1889.....	6	6	11	36	45	87	92	39
1890.....	7	5	13	29	52	84	100	50
Total.....	110	87	232	466	788	1,323	1,600	701

BRAIN DISEASES.

The number of decedents from diseases of the brain proper, for 1890, was 217.

Of the 217 decedents, 113 were males, and 104 were females.

In regard to parentage, 119 were of native, and 98 of foreign parentage.

The deaths in the different seasons of the year were as follows :

First Quarter.....	55	Third Quarter.....	48
Second Quarter.....	64	Fourth Quarter.....	50
<hr/>			
First half.....	119	Last half.....	98
<hr/>			
Whole number..... 217			

Although it is in accordance with the rule that the smallest number of deaths from diseases of the brain, not including apoplexy, should occur in the first quarter of the year, the variation, in 1890, not only occurred in the third but also in the fourth quarter.

Brain diseases occur largely in children. Of the 217 decedents from those causes, in 1890, 99 were under five years of age, and 20 were from five to ten years of age.

The following Table will present the statistics of mortality from diseases of the brain, for twenty-six years :

TABLE LXV.

Mortality in the State from Brain Diseases, with the Percentage, Sex, Parentage and Locality for twenty-six years, from 1865 to 1890, inclusive.

YEARS.	Number of Deaths from Brain Diseases.	Per cent.	SEX.		PARENTAGE		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869	444	2.85	243	201	281	163	17	23	37	128	209	30
1870-1874	584	2.99	317	267	335	249	13	31	44	168	314	14
1875.....	118	2.73	63	55	69	49	3	6	5	30	65	9
1876.....	150	3.64	92	58	89	61	3	11	7	39	85	5
1877.....	160	3.59	88	72	91	69	3	7	11	49	85	5
1878.....	142	3.19	75	67	76	66	1	13	12	45	68	3
1879.....	163	3.65	82	81	88	75	3	13	15	51	75	6
1875-1879	733	3.36	400	333	413	320	13	50	50	214	378	28
1880.....	164	3.39	87	77	89	75	3	6	12	56	81	6
1881.....	186	3.69	103	83	85	101	7	11	14	58	91	5
1882.....	181	3.50	93	88	92	89	4	10	10	71	80	6
1883.....	187	3.54	96	91	100	87	8	14	15	52	94	4
1884.....	148	2.88	90	58	77	71	4	9	8	41	83	3
1880-1884	866	3.40	469	397	443	423	26	50	59	278	429	24
1885	189	3.51	98	91	94	95	2	11	20	53	100	3
1886.....	182	3.09	108	74	84	98	4	14	13	69	78	4
1887.....	203	3.21	120	83	103	100	8	9	14	75	95	2
1888	212	3.21	114	98	109	103	4	19	12	76	90	11
1889.....	189	3.58	91	98	96	93	5	12	17	72	78	5
1885-1889	975	3.30	531	444	486	489	23	65	76	345	441	25
1890.....	217	3.13	113	104	119	98	7	13	17	90	85	5
Total, 26 years ..	3,819	3.60	2,073	1,746	2,077	1,712	99	232	283	1,223	1,856	126

* Providence city not included.

N. B. Cerebro spinal meningitis, hydrocephalus, tubercular meningitis and insanity not included in the above Table.

BRONCHITIS.

The number of decedents, in 1890, whose deaths were reported as having been caused by bronchitis, was 275. This is a larger number than was ever before returned in a single year.

Of the 275 decedents 140 were males, and 135 were females ; or at the rate of 104 males to each 100 females.

In relation to parentage, 116 were of native, and 159 of foreign parentage.

In regard to age, 138 of the decedents were under 5 years of age, 4 were between 5 and 20 years, 17 between 20 and 40 years, 25 between 40 and 60 years, and of the remaining 91 decedents above 60 years of age, there were 36 deaths from chronic bronchitis.

During the first four months of the year the decedents from bronchitis numbered 129; during the last four months the number was 65.

The following Table will show various facts in relation to the mortality from bronchitis, for twenty-six years :

TABLE LXVI.

Mortality in the State from Bronchitis, twenty-six years, 1865 to 1890, inclusive.

YEARS.	Number of Deaths.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.*	Washington County.
1865.....	9	.27	4	5	6	3	1	.....	3	.....	5	.....
1866.....	14	.47	3	11	10	4	.....	1	2	7	4	.....
1867.....	19	.66	8	11	10	9	1	2	1	5	10	.....
1868.....	20	.69	9	11	7	13	.....	1	2	5	10	2
1869.....	20	.59	8	12	9	11	.....	.....	1	4	15	.....
1865-1869.....	82	.53	32	50	42	40	2	4	9	21	44	2
1870.....	26	.84	15	11	11	15	.....	.....	1	8	17	.....
1871.....	24	.78	10	14	11	13	.....	1	1	5	17	.....
1872.....	25	.65	10	15	11	14	1	1	1	6	16	.....
1873.....	27	.64	12	15	11	16	.....	.....	1	7	18	1
1874.....	39	.96	22	17	12	27	.....	.....	.....	6	32	1
1870-1874.....	141	.72	69	72	56	85	1	2	4	32	100	2
1875.....	57	1.39	32	25	29	28	.....	.....	1	21	33	2
1876.....	57	1.46	23	34	26	31	.....	2	.....	7	46	2
1877.....	69	1.62	32	37	35	34	1	1	1	22	44	.....
1878.....	80	1.89	30	50	37	43	1	2	6	22	48	1
1879.....	62	1.47	31	31	31	31	1	1	5	21	34	.....
1875-1879.....	325	1.49	148	177	158	167	3	6	13	93	205	5
1880.....	91	1.86	49	42	44	47	1	6	6	21	56	1
1881.....	84	.67	48	36	39	45	1	1	2	25	53	2
1882.....	100	1.27	39	61	47	53	3	2	6	25	60	4
1883.....	111	2.10	56	55	51	60	5	2	3	42	57	2
1884.....	118	2.29	58	60	40	78	6	.....	8	42	62	.....
1880-1884.....	504	1.98	250	254	221	283	16	11	25	155	288	9
1885.....	168	3.08	82	86	91	77	5	3	13	71	76	.....
1886.....	174	2.96	75	99	81	93	3	4	9	71	83	1
1887.....	176	2.77	90	86	60	116	3	6	19	63	84	1
1888.....	228	3.45	105	123	79	149	3	4	17	110	88	6
1889.....	260	4.20	128	132	90	170	4	8	18	109	110	11
1885-1889.....	1,066	3.30	480	526	401	605	18	25	76	427	441	19
1890.....	275	4.01	140	135	116	159	5	4	15	107	138	6

* Not including Providence city.

CANCER.

There were 165 decedents, in 1890, whose deaths were caused by cancer, according to the returns. The term cancer includes all the various kinds, and in whatever place located.

The varieties of cancer, as reported, may be found in Tables VII and VIII, on pages 20 and 33. They are classed in Table IX as follows: Cancer in various localities, or cancer (various), 74; cancer of the breast, 14; of the liver, 22; of the stomach, 27; of the uterus, 28.

In 1890 the deaths from cancer, in the several divisions of the year, were as follows :

First Quarter.....	48	Third Quarter.....	30
Second Quarter.....	37	Fourth Quarter	50
—	—	—	—
First half.....	85	Last half.....	80
Whole Year.....	169		

Sex.—Of the 165 decedents from cancer, 56 were males, and 109 were females; or 34 males and 66 females in every 100.

Parentage.—There were 92 of native parentage, and 73 of foreign.

The following Table will show the facts of mortality from cancer, in relation to sex, parentage and locality, for twenty-six years :

TABLE LXVII.

Mortality in the State from Cancer, 1865 to 1890, inclusive.

YEARS.	Number of Deaths.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
5 years, 1865-1869.	303	1.95	94	219	248	55	19	28	38	78	121	19
1870.....	80	2.58	27	53	66	14	5	12	8	25	27	3
1871.....	66	2.13	25	41	47	19	.....	7	5	25	25	4
1872.....	95	2.46	26	69	66	29	4	7	9	21	50	4
1873.....	106	2.53	45	61	76	30	4	6	12	32	44	8
1874.....	87	2.13	23	64	67	20	4	6	12	24	38	3
1870-1874.....	434	2.23	146	288	322	112	17	38	46	127	184	22
1875.....	95	2.31	24	71	62	33	3	6	7	25	49	5
1876.....	106	2.72	27	79	72	34	5	6	8	27	53	7
1877.....	135	3.17	29	106	87	48	3	7	9	37	66	13
1878.....	119	2.82	38	81	79	40	5	11	8	37	48	10
1879.....	125	2.96	39	86	70	55	9	6	9	28	66	7
1875-1879.....	580	2.66	157	423	370	210	25	36	41	154	282	42
1880.....	125	2.72	45	80	73	52	5	10	12	26	68	4
1881.....	145	2.90	40	105	90	55	8	10	12	42	65	8
1882.....	132	2.75	40	92	82	50	5	15	9	43	52	8
1883.....	169	3.20	51	118	105	64	3	17	12	49	86	2
1884.....	156	3.05	39	117	88	68	2	18	21	41	70	4
1880-1884.....	727	2.87	215	512	438	289	23	70	66	201	341	26
1885.....	193	3.59	52	141	114	79	8	9	8	67	88	13
1886.....	162	2.77	42	120	75	87	6	11	9	37	87	12
1887.....	159	2.50	49	110	96	63	8	5	10	49	80	7
1888.....	193	2.93	67	126	128	65	9	10	12	57	88	17
1889.....	189	3.03	65	124	104	85	4	10	13	57	82	23
1885-1889.....	896	2.94	275	621	517	379	35	45	52	267	425	72
1890.....	165	2.41	56	109	92	73	14	10	13	46	74	5

* Not including Providence city.

CHILD-BIRTH.

Under the head of "Child-birth" are included, in this connection, puerperal fever, puerperal convulsions, and whatever causes of death that may have occurred as the direct result of child-birth.

The number reported in 1890 was 41 ; 18 of which were from the immediate effects of child-birth, including metritis, hemorrhage, &c., 6 from septicæmia, 4 from puerperal convulsions, and 13 from puerperal fever.

Of the whole number 12 were of native and 29 of foreign parentage.

The number of decedents was the same as in the previous year.

The following Table will present the various relations in regard to the mortality from child-birth, for twenty-six years, 1865-1890 :

TABLE LXVIII.

Mortality in the State from Child-Birth, with the Percentage of the Whole Number of Deaths, Parentage, and Locality, for twenty-six years, from 1865 to 1890, inclusive.

YEARS.	Number of Deaths from Child Birth.	Per cent.	PARENTAGE.		STATE DIVISIONS.					
			Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869	145	1.00	59	86	7	8	12	58	51	9
1870-1874	230	1.19	104	126	6	15	17	77	96	19
1875	53	1.30	26	27	1	6	1	10	31	4
1876	48	1.24	21	27	3	...	1	18	23	3
1877	46	1.09	18	28	4	3	5	17	17	...
1878	43	1.01	23	20	2	4	3	9	21	4
1879	43	1.02	21	22	1	7	2	6	23	4
1875-1879	233	1.13	109	124	11	20	12	60	115	15
1880	51	1.11	23	28	4	4	3	10	27	3
1881	60	1.28	26	34	1	1	3	22	29	4
1882	50	1.03	18	32	.....	5	1	16	27	1
1883	58	1.10	26	32	1	5	9	14	27	2
1884	47	.91	17	30	.....	3	3	19	18	4
1880-1884	266	1.09	110	156	6	18	19	81	128	14
1885	47	.87	21	26	.....	3	4	15	24	1
1886	41	.70	17	24	.....	4	4	15	17	1
1887	53	.71	15	38	.....	5	4	18	26	...
1888	51	.77	13	38	.....	3	.....	25	20	3
1889	41	.65	14	27	1	5	2	16	13	4
1885-1889	233	.74	80	153	1	20	14	89	100	9
1890	41	.58	12	29	3	4	4	10	17	3
Total, 26 years	1,148	1.00	474	674	34	85	78	375	507	69

* Not including Providence city.

CHOLERA INFANTUM.

The number of deaths from cholera infantum, according to the returns for 1890, was 582.

Of the 582 decedents, 282 were males, and 300 were females.

Of parentage, 202 were of native, and 380 of foreign parentage; or about 190 of foreign to every 100 of native parentage.

The mortality from cholera infantum, during 1890, was nearly 50 per cent. larger than during the year 1889.

As may be seen on the following page, the number of decedents from cholera infantum, during the twenty-six years from 1865 to 1890, inclusive, was 6,994.

The proportion to total mortality, for the period of twenty-six years, was 6.0 per cent. For 1888 the proportion was 7.8 per cent.; for 1889, 6.8 per cent., and for 1890, 8.4 per cent.

There were 108 males to every 100 females among the decedents during the twenty-six years; and 136 decedents of foreign parentage to every 100 of native, during the same period.

The following Table shows the whole number of reported deaths from cholera infantum; the sex and parentage of the decedents; and the number in each of the larger divisions of the State, in each of the last twenty-six years:

TABLE LXIX.

Mortality in the State from Cholera Infantum, 1865 to 1890, inclusive.

YEARS.	Number of Deaths.	SEX.		PARENTAGE		STATE DIVISIONS.					
		Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	677	360	317	318	359	41	36	47	224	281	48
1870.....	213	106	107	95	118	15	15	13	60	93	8
1871.....	172	85	87	82	90	14	12	12	59	62	13
1872.....	391	195	196	167	224	16	16	21	157	151	30
1873.....	285	148	137	165	120	17	14	16	120	99	19
1874.....	265	140	125	115	150	4	12	5	84	134	26
1870-1874.....	1,326	674	652	624	702	66	69	67	489	539	96
1875.....	318	156	162	155	163	20	16	20	108	136	18
1876.....	250	131	119	105	145	5	12	29	68	124	12
1877.....	259	139	120	96	163	12	13	9	96	122	7
1878.....	168	96	72	73	95	7	14	7	64	71	5
1879.....	161	88	73	71	90	8	16	21	51	59	6
1875-1879.....	1,156	610	546	500	656	52	71	86	387	512	48
1880.....	247	123	124	109	138	13	11	10	93	100	20
1881.....	240	130	110	102	138	10	22	14	75	102	17
1882.....	325	173	152	133	192	20	11	19	132	130	13
1883.....	242	124	118	104	138	12	7	22	88	108	5
1884.....	325	177	148	139	186	10	12	26	114	144	19
1880-1884.....	1,379	727	652	587	792	65	63	91	502	584	74
1885.....	279	150	129	128	151	5	23	16	133	86	16
1886.....	377	179	198	148	234	4	29	15	194	120	15
1887.....	355	200	155	145	210	16	16	35	160	119	9
1888.....	467	239	228	184	283	18	35	28	219	149	18
1889.....	396	209	187	132	264	18	32	20	199	116	11
1885-1889.....	1,874	977	897	732	1,142	61	135	114	905	590	69
1890.....	582	282	300	202	380	19	57	33	245	209	19
Total, 26 years.....	6,994	3,630	3,364	2,963	4,031	304	431	438	2,752	2,715	354

* Not including Providence city.

CONSUMPTION.

The decedents from consumption, during 1890, numbered 852. The number is 125 more than in the preceding year, and the largest on record.

Sex.—Of these 852 decedents 422 were males, and 430 were females; giving less than 102 female decedents to every 100 male decedents; or 49.5 males and 50.5 females in every 100 decedents from consumption, a very unusually small difference.

As a rule, for the period of twenty years (1865–1884), there were one hundred and twenty or more females to every 100 male decedents from consumption.

Parentage.—There were 280 decedents of native parentage, and 572 of foreign; a proportion of 200 of foreign parentage to every 100 of native.

Season.—The largest number of deaths in any one month, 107, occurred in January; the next largest, 84, in March; the smallest number, 55, in December.

The number in each quarter of the year was as follows :

First Quarter.....	252	Third Quarter.....	198
Second Quarter.....	211	Fourth Quarter.....	191
—			
First half.....	463	Second half.....	389
Whole Year.....			
852.			

There was less uniformity of the numbers in each quarter of the year than obtained as a rule in most of the preceding years.

Ages.—During 1890, of the 852 decedents from consumption, 251, or nearly one-third, were between the ages of 20 and 30; and 170, or more than one-fifth, were between the ages of 30 and 40.

In order to show more concisely the relation of age to mortality from consumption, during 1890, the following age-periods and numbers are presented :

Under 10 years of age.....	42
Between 10 and 20 years.....	86
Between 20 and 30 years.....	251
Between 30 and 40 years.....	198
Between 40 and 50 years.....	111
Between 50 and 70 years.....	133
Over 70 years.....	31
<hr/>	
Total.....	852

The following Table shows the total deaths from all reported *known causes*, with the *number* and *percentage* of deaths from consumption of the same, in each of the larger divisions of the State, and in the whole State, *in each of the last seventeen years*; and also the aggregate for a period of twenty-five years, from 1860 to 1884, inclusive :

CONSUMPTION.

STATISTICS OF COUNTIES.

NUMBER AND PERCENTAGE,

THIRTY-ONE YEARS.

TABLE LXX.—CONSUMPTION.—*Number, Locality and Percentage.*

COUNTIES.	1874.	1875	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Total 25 years, 1860-1884.
BRISTOL COUNTY.																		
Total deaths, stated causes.	159	162	148	201	187	141	209	203	183	197	199	185	221	217	251	208	253	4,135
Consumption.....	18	21	19	27	23	16	19	25	36	19	21	12	23	20	28	20	31	543
Percentage.....	11.32	12.97	12.83	13.43	12.30	11.35	9.09	12.31	19.68	9.64	10.50	6.48	10.35	9.22	11.15	9.62	11.85	13.13
KENT COUNTY.																		
Total deaths, stated causes.	252	263	209	251	249	277	293	313	288	283	268	355	385	343	408	454	470	6,206
Consumption.....	32	43	28	42	41	38	45	36	51	39	37	45	43	34	55	45	38	1,078
Percentage.....	12.69	16.35	13.39	16.73	16.47	13.72	15.35	11.20	17.71	13.78	13.43	12.70	11.20	9.91	13.44	9.84	8.08	17.37
NEWPORT COUNTY.																		
Total deaths, stated causes	221	277	280	243	265	330	324	346	378	401	403	408	433	435	458	440	470	7,869
Consumption	26	41	45	33	31	45	34	51	46	55	43	47	57	41	32	37	51	1,086
Percentage.....	11.77	14.80	16.07	13.58	11.69	13.64	10.40	14.74	12.17	13.72	10.67	11.52	13.16	9.19	7.00	8.41	10.85	13.80
PROVIDENCE COUNTY.*																		
Total deaths, stated causes.	1,217	1,230	1,110	1,301	1,308	1,233	1,437	1,451	1,509	1,656	1,723	1,918	2,087	2,345	2,465	2,286	2,374	28,161
Consumption	136	201	211	222	229	197	189	220	224	257	248	273	276	246	273	257	305	4,799
Percentage.	11.41	16.34	19.01	15.96	17.51	15.98	13.35	15.16	14.82	15.52	14.13	14.20	13.05	10.49	11.07	11.24	12.84	17.04

* Not including Providence city.

TABLE LXX.—CONSUMPTION.—*Number, Locality and Percentage.*—Continued.

COUNTIES.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Total 25 years, 1860-1884.
PROVIDENCE CITY.																		
Total deaths, stated causes.	1,965	1,894	1,850	1,932	1,973	2,017	2,063	2,130	2,230	2,351	2,227	2,157	2,341	2,630	2,644	2,495	2,859	39,195
Consumption.....	270	297	284	294	305	293	322	314	351	364	344	348	368	323	362	315	394	6,374
Percentage.	13.74	15.68	15.35	15.22	15.46	14.53	15.60	16.15	15.73	15.48	15.43	16.10	15.65	12.23	13.66	12.55	13.69	16.26
WASHINGTON COUNTY.																		
Total deaths, stated causes.	263	284	306	240	249	220	270	226	215	208	279	307	331	351	368	337	316	5,711
Consumption	44	47	68	43	47	48	33	30	29	32	46	56	59	46	50	53	33	1,031
Percentage.....	16.73	16.55	22.22	17.91	18.88	21.82	12.22	13.27	13.49	15.40	16.28	17.93	17.52	13.10	13.58	15.68	10.38	18.05
WHOLE STATE.																		
Total deaths, stated causes	4,077	4,110	3,903	4,258	4,231	4,218	4,596	4,669	4,804	5,096	5,099	5,330	5,798	6,321	6,594	6,220	6,891	91,477
Consumption.....	529	650	655	661	676	637	642	706	737	766	739	781	826	710	800	727	852	14,911
Percentage.....	12.96	15.79	16.78	15.52	15.98	15.10	14.01	15.12	15.33	15.03	14.34	14.42	14.12	11.19	12.13	11.61	12.29	16.30

TABLE LXXI.

Mortality in the State from Consumption, with the Percentage of the Whole Number of Deaths from all Causes, and the Sex, Parentage and Locality, in the Aggregate of Different Periods, 1865-1890.

YEARS.	Total Deaths from Consumption.	Percentage.	SEX.		PARENTAGE		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol Connty.	Kent Connty.	Newport Connty.	Providence Connty.*	Providence City.	Washington Connty.
1865-1869.....	2,690	17.29	1,244	1,446	1,575	1,115	116	226	233	909	1,004	202
1870-1874.....	2,808	14.43	1,217	1,591	1,507	1,301	99	216	159	924	1,175	170
1875-1879.....	3,279	15.04	1,436	1,843	1,499	1,780	106	192	195	1,060	1,473	253
1880-1884.....	3,590	14.16	1,597	1,993	1,399	2,191	120	208	229	1,138	1,725	170
1885.....	781	11.49	382	399	315	466	12	45	47	273	348	56
1886.....	826	14.12	382	441	308	518	23	43	57	276	368	59
1887.....	710	11.19	312	398	266	444	20	34	41	246	323	46
1888.....	800	12.13	391	409	281	516	28	55	32	273	362	50
1889.....	727	11.61	356	371	239	488	20	45	37	257	315	53
1885-1889.....	3,844	12.63	1,823	2,021	1,412	2,432	103	222	214	1,325	1,716	264
1890.....	852	12.29	422	430	280	572	31	38	51	305	391	33
Total, 26 years..	17,063	14.31	7,739	9,324	7,672	9,391	575	1,102	1,081	5,661	7,487	1,157

CONSUMPTION. *Proportion of Deaths to Population.*

The proportion of deaths from consumption to the *population* in the different localities in the State, during the last six years, may be seen in the following summaries :

* Providence city not included.

For four years, 1885 to 1888, inclusive.

	Persons, One Death to every	In every 1,000 of Population.
Bristol County.....	614.....or.....	1.63
Kent County.....	515.....or.....	1.91
Newport County.....	692.....or.....	1.45
Providence County*.....	406.....or.....	2.46
Providence City.....	345.....or.....	2.90
Washington County.....	434.....or.....	2.30
Whole State.....	381.....or.....	2.60

1889.

	Persons, One Death to every	In every 1,000 of Population.
Bristol County.....	590.....or.....	1.69
Kent County.....	505.....or.....	1.91
Newport County.....	815.....or.....	1.22
Providence County Towns.....	503.....or.....	1.94
Pawtucket.....	425.....or.....	2.35
Providence City.....	405.....or.....	2.46
Woonsocket.....	377.....or.....	2.65
Washington County.....	437.....or.....	2.30
Whole State.....	462.....or.....	2.16

1890.

	Persons, One Death to every	In every 1,000 of Population.
Bristol County.....	368.....or.....	2.71
Kent County.....	764.....or.....	1.42
Newport County.....	560.....or.....	1.78
Providence County Towns.....	333.....or.....	3.00
Pawtucket.....	486.....or.....	2.14
Providence City.....	335.....or.....	3.00
Woonsocket.....	285.....or.....	3.50
Washington County.....	716.....or.....	1.40
Whole State.....	410.....or.....	2.44

There was an increase of deaths from consumption of more than one per thousand of population in Bristol county and Providence county towns over the proportion of the preceding year, and an increase in all localities except in Kent and Washington counties.

* Not including Providence city.

In Washington county the proportion was less than in any one of the preceding twenty years.

The circumstance of decreased mortality from consumption in Washington county, in 1890, is the more remarkable as occurring during the year of the greatly increased and severer form of visitation of epidemic influenza.

The same may be said of Kent county and Pawtucket, although in a greatly less degree.

CROUP.

There were 83 decedents from croup, in 1890.

Sex.—Of the 83 decedents from croup, in 1890, there were 53 males and 30 females, a proportion of 176 males to each 100 females, which is in accordance with the rule of previous years in which there has been a preponderance of males.

Parentage.—There were 28 decedents of native parentage, and 55 of foreign parentage. The proportions were in the ratio of 200 of foreign to each 100 of native parentage.

Age.—There were 19 of the decedents under one year of age, 18 of one year and under two, 33 of two years and under five, 13 between five and ten.

Season.—

First Quarter.....	35	Third Quarter.....	10
Second Quarter.....	13	Fourth Quarter	25
	—		—
First half.....	48	Last half.....	35
Whole Year.....	83		

The following Table will exhibit various facts in relation to mortality from croup, for twenty-six years :

TABLE LXXII.

Mortality in the State from Croup, from 1865 to 1890, inclusive.

YEARS.	Number of Deaths.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.....	94	2.92	44	50	32	62	16	4	2	40	29	3
1866.....	53	1.89	26	27	22	31	3	3	3	18	23	3
1867.....	50	1.86	25	25	21	29	3	1	7	20	19	.....
1868.....	30	1.14	13	17	14	16	.....	2	3	14	11	.....
1869.....	41	1.33	19	22	14	27	.....	4	5	10	19	3
1865-1869.....	368	1.73	127	141	103	165	22	14	20	102	101	9
1870.....	53	1.70	29	24	25	28	.....	3	1	20	27	2
1871.....	72	2.33	39	33	31	41	6	8	2	20	35	1
1872.....	66	1.70	37	29	17	49	4	2	3	28	27	2
1873.....	68	1.62	30	28	35	33	2	7	3	33	22	1
1874.....	65	1.59	39	26	38	27	.....	10	1	24	29	1
1870-1874.....	324	1.66	174	150	146	178	12	30	10	125	140	7
1875.....	96	2.33	53	43	43	53	1	3	4	26	56	6
1876.....	102	2.61	50	52	42	60	1	6	.....	26	65	4
1877.....	95	2.23	48	47	34	61	4	3	1	47	40	.....
1878.....	93	2.20	45	48	43	50	14	3	7	25	39	5
1879.....	96	2.28	53	38	40	56	3	6	15	25	43	4
1875-1879.....	482	2.21	254	228	202	280	23	21	27	149	243	19
1880.....	66	1.45	32	34	27	39	3	3	4	20	30	6
1881.....	101	2.16	45	56	38	63	2	6	4	38	49	2
1882.....	77	1.60	41	36	32	45	1	2	6	33	32	3
1883.....	71	1.40	32	39	33	38	1	6	4	25	35	.....
1884.....	80	1.55	40	40	32	48	2	11	4	29	34	.....
1880-1884.....	395	1.56	190	205	162	233	9	28	22	145	180	11
1885.....	94	1.74	45	49	42	52	4	8	6	46	28	2
1886.....	90	1.53	45	45	39	51	2	18	12	24	32	2
1887.....	113	1.79	58	55	43	70	9	12	4	43	39	6
1888.....	79	1.19	43	36	34	45	4	2	7	34	27	5
1889.....	80	1.28	37	43	24	56	3	15	1	27	33	1
1885-1889.....	456	1.50	228	228	182	274	22	55	30	174	159	16
1890.....	83	1.19	53	30	28	55	2	14	2	32	31	2
Total, 26 years.	2,008	1.48	1,026	982	823	1,185	90	162	111	727	854	64

* Not including Providence city.

DIARRHŒA AND DYSENTERY.

There were 182 decedents from diarrhœa and dysentery, in 1890.

Sex.—Of the 182, 84 were males, and 98 were females, or in the ratio of about 86 males to each 100 females.

Parentage.—There were, of the 182 decedents, 74 of native parentage, and 108 of foreign parentage, or a proportion of about 146 of foreign parentage to every 100 of native.

Age.—There were 88 of the decedents from diarrhœa and dysentery under 5 years of age, and there were 44 over 70 years of age, leaving 50 for all the 65 years between 5 and 70.

Locality.—Of the 182 decedents, 140 were in Providence county, and 22 in Newport county. Nine only were reported from Kent county, six from Washington county, and five from Bristol county.

Season.—There were 118 of the deaths from diarrhœa and dysentery that occurred during the months of July, August and September.

The following Table will show the deaths from diarrhœa and dysentery, with the percentage, sex, parentage, etc., for each of twenty-six years, beginning with 1865 :

TABLE LXXIII.

Mortality in the State from Diarrhœa and Dysentery, 1865 to 1890, inclusive.

YEARS.	Total Deaths.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
5 yrs, 1865-1869.	839	5.39	429	410	410	429	35	63	103	264	312	62
1870.....	102	3.15	60	42	46	56	.....	7	12	38	38	7
1871.....	88	2.63	48	40	43	45	3	3	5	34	40	3
1872.....	183	4.31	112	71	81	102	5	17	11	63	87	.....
1873.....	100	2.27	47	53	70	30	8	13	3	30	44	2
1874.....	103	2.44	50	53	51	52	2	7	3	22	67	2
1870-1874.....	576	2.96	317	259	291	285	18	47	34	187	276	14
1875.....	106	2.46	60	46	60	46	9	6	1	34	51	5
1876.....	122	2.96	66	56	52	70	3	6	2	41	65	5
1877.....	142	3.19	64	78	73	69	8	6	9	54	55	10
1878.....	93	2.09	42	51	51	42	5	8	2	34	39	5
1879.....	97	2.17	48	49	47	50	9	6	10	27	42	3
1875-1879.....	560	2.57	280	280	283	277	34	32	24	190	252	28
1880.....	98	2.03	49	49	50	48	4	6	10	32	42	4
1881.....	119	2.37	56	63	54	65	2	4	3	47	57	6
1882.....	158	3.11	75	83	69	89	2	4	28	57	64	3
1883.....	182	3.45	86	96	88	94	7	7	16	74	75	3
1884.....	153	2.98	74	79	69	84	10	5	11	66	56	5
1880-1884.....	710	2.80	340	370	330	380	25	26	68	276	294	21
1885.....	120	2.23	61	59	51	69	7	6	6	62	35	4
1886.....	159	2.72	64	95	70	89	7	11	1	73	59	8
1887.....	199	3.11	107	92	70	129	6	16	4	92	72	9
1888.....	157	2.31	69	88	97	60	6	8	3	54	71	15
1889.....	150	2.54	73	86	67	92	1	12	17	71	50	8
1885-1889.....	794	2.61	374	420	355	439	27	53	31	352	287	44
1890.....	182	2.62	84	98	74	108	5	9	22	77	63	6
Total, 26 years.	3,661	3.26	1,824	1,837	1,743	1,918	144	230	282	1,346	1,484	175

* Not including Providence city.

DIPHTHERIA.

The number of deaths from diphtheria, in 1890, was 211, which was 27 more than in 1889.

Sex.—Of the 211 decedents, 112 were males, and 99 were females, or a proportion of 113 males to each 100 females. As a rule there is a considerable preponderance of females.

Parentage.—There were 93 of native, and 118 of foreign parentage, a proportion of about 44 of native and 56 of foreign in each 100 decedents.

Season.—There were 62 deaths from diphtheria in the first quarter, 53 in the second quarter, 52 in the third quarter, and 44 in the fourth quarter.

Age.—There were 123 deaths under five years of age, 65 between five and ten, 15 between ten and fifteen, 4 between fifteen and twenty, and 4 above twenty years of age.

Locality.—Of the 211 decedents, 180 were in Providence county; 9 in Kent county; 1 in Bristol county; 16 in Newport county; and 5 in Washington county.

The following Table shows the mortality in the State from diphtheria, for twenty-six years, beginning with 1865, also the percentage of deaths, the sex, parentage, etc.:

TABLE LXXIV.

Mortality in the State from Diphtheria—1865-1890.

YEARS.	Whole Number of Deaths, All Causes.	Number of Deaths, Diphtheria.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
				Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869	15,558	230	1.48	107	123	147	83	13	30	33	55	50	49
1870.....	3,238	33	1.06	17	16	18	15	.....	9	3	4	10	7
1871.....	3,344	57	1.84	23	34	29	28	1	14	.....	12	21	9
1872.....	4,247	48	1.24	24	24	35	13	.....	4	6	7	27	4
1873.....	4,403	45	1.08	24	21	35	10	.....	2	7	12	23	1
1874.....	4,229	59	1.45	30	29	37	22	2	11	4	15	20	7
1870-1874.	19,461	242	1.24	118	124	154	88	3	40	20	50	101	28
1875.....	4,317	33	.80	17	16	18	15	1	4	3	8	14	3
1876.	4,116	159	3.86	77	82	69	90	1	2	9	29	111	7
1877.....	4,450	492	11.56	239	253	233	259	12	44	2	122	295	17
1878.....	4,441	435	9.80	224	211	201	234	21	29	23	106	245	11
1879.....	4,472	259	5.79	121	138	143	116	7	19	20	95	106	12
1875-1879.	21,796	1,378	6.33	678	700	664	714	42	98	57	360	771	50
1880.....	4,829	152	3.40	73	79	75	77	3	6	2	63	61	17
1881.....	5,016	216	4.63	106	110	118	98	10	16	8	53	116	13
1882.....	5,074	101	1.99	48	53	55	46	.....	3	4	29	48	17
1883.....	5,282	95	1.88	39	56	45	50	1	7	3	26	54	4
1884.....	5,141	119	2.31	65	54	47	72	8	1	9	39	58	4
1880-1884	25,342	683	2.66	331	352	340	343	22	33	26	210	337	55
1885.....	5,389	99	1.83	47	52	48	51	5	5	6	39	37	7
1886.....	5,842	228	3.90	98	130	101	127	20	21	23	61	98	2
1887.....	6,340	287	4.53	135	152	101	186	15	11	4	114	108	35
1888.....	6,594	191	2.86	87	104	79	112	13	3	9	58	98	10
1889.....	6,259	184	2.93	80	104	89	95	3	10	11	56	97	7
1885-1889	30,431	987	3.25	447	542	418	571	56	50	53	331	438	61
1890.....	6,934	211	3.04	112	99	93	118	1	9	16	86	94	5
Total, 26 years.	119,522	3,733	3.00	1,793	1,940	1,816	1,917	137	260	205	1,092	1,791	248

* Not including Providence city.

FEVER, MALARIAL.

The number of deaths, during 1890, from diseases classed as fever malarial, was 42. The number in 1889 was 40; in 1888, 71; in 1887, 85; in 1886, 43; in 1885, 30; in 1884, 25; in 1883, 12.

Sex.—Of the 42 decedents from malarial fevers, in 1890, 20 were males and 22 were females, or about 91 males to every 100 females.

Parentage.—There were, of the 42 decedents from malarial diseases, 10 of native parentage, and 32 of foreign, or 320 of foreign parentage to every 100 of native.

Season.—The deaths from malarial diseases occurred in the different seasons of the year as follows :

First Quarter.....	5	Third Quarter.....	14
Second Quarter.....	15	Fourth Quarter.....	8
	—		—
First half of year.....	20	Last half of year.....	22
Whole number.....		42	

Age.—The number of decedents in the different periods of life was as follows :

Under 5 years of age.....	5
From 5 to 20 years of age.....	5
From 20 to 40 years of age.....	14
From 40 to 60 years of age.....	7
60 and over.....	11
	—
	42

Localities.—Bristol county, 1; Kent county, 0; Newport county, 0; Providence county, 40; Washington county, 1.

FEVERS, TYPHOID, ETC.

The number of decedents, whose deaths were returned as having been caused by "fever" of some form, not malarial nor cerebro-spinal, was 116. Deaths from puerperal fever are not included.

The term "fever" includes the following types of febrile diseases, as may be seen in Table VII, on page 23: "fevers unspecified," 5; "catarrhal," 1; "gastric," 5; "continued," 3; "typhoid," 102.

The following Table exhibits, for each of the last twenty-six years, the number and the percentage, and the sex and parentage of the decedents from fevers returned as from gastric and typhoid, and the number in each division of the State :

TABLE LXXV.

Mortality in the State from Fevers, Non-Malarial—1865 to 1890, inclusive.

YEARS.	Total Deaths.	Percentage.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	683	4.4	345	338	451	232	35	44	79	250	211	64
1870	153	4.7	66	87	80	75	5	11	14	57	49	17
1871.....	125	3.7	60	65	69	56	2	8	10	41	51	13
1872.....	179	4.2	87	92	91	86	4	12	6	75	65	17
1873.....	172	3.9	73	99	113	59	4	9	9	61	56	33
1874.....	117	2.8	57	60	56	61	1	10	3	37	58	8
1870-1874.....	746	3.8	343	403	409	337	16	50	42	271	279	88
1875.....	147	3.4	73	74	90	57	1	4	6	49	69	18
1876.....	126	3.0	65	61	71	55	5	9	13	44	33	22
1877.....	134	3.0	63	71	65	69	8	10	8	52	44	12
1878.....	150	3.4	68	82	77	73	13	13	6	59	47	12
1879.....	114	2.7	47	67	63	51	4	13	6	44	40	7
1875-1879.....	671	3.1	316	355	366	305	31	49	39	248	233	71
1880.....	158	3.4	74	84	94	64	8	12	5	66	52	15
1881.....	143	2.8	74	69	74	69	4	13	14	58	41	13
1882.....	229	4.7	111	118	100	129	6	11	5	56	145	6
1883.....	258	4.8	146	112	117	141	9	16	10	82	134	7
1884.....	165	3.2	83	82	78	87	7	7	12	66	64	9
1880-1884.....	953	3.7	488	465	463	490	34	59	46	328	436	50
1885.....	158	2.9	71	87	70	88	6	14	8	69	53	8
1886.....	169	2.9	78	91	76	93	6	8	11	66	70	8
1887.....	127	2.0	67	60	58	69	2	14	9	49	38	15
1888.....	235	3.6	125	110	88	147	20	24	14	66	102	9
1889.....	143	2.3	85	58	56	87	2	17	9	46	60	9
1885-1889.....	832	2.7	426	406	348	484	36	77	51	296	323	49
1890.....	107	1.5	58	49	39	68	7	8	5	37	43	7
Total, 26 years.	3,992	2.6	1,976	2,016	2,076	1,916	159	287	262	1,430	1,525	329

* Not including Providence city.

During 1890, of the 107 decedents from typhoid fever, there were 58 males and 49 females, a proportion of about 118 males to every one hundred females. The difference in the sexes of the mortality from fevers is not usually very great.

During the period of twenty-five years, 1865 to 1889, inclusive, the proportions of the sexes of the decedents from "fever," in the State, were 102 females to every 100 males.

Parentage.—There were 39 decedents from enteric fever, of native parentage, in 1890, and 68 of foreign parentage, a proportion of about 64 of foreign and 36 of native in every 100 decedents.

Season.—

First Quarter.....	25	Third Quarter.....	36
Second Quarter.....	15	Fourth Quarter	31
	—		—
First half of the year.....	40	Last half of the year.....	67
Whole Year.....		107	

The following Table shows the number of decedents from fevers, in each division of ages, in each of the last twenty-six years, in the State of Rhode Island :

TABLE LXXVI.

TYPHOID FEVER.		PERIODS OF LIFE.										
YEARS.		Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Not stated.
1865.....		35	18	46	54	30	14	18	7	5	2	....
1866.....		23	10	21	26	21	16	9	14	10	....	....
1867.....		17	6	24	33	12	11	8	4	2	2	1
1868.....		10	7	10	21	8	8	10	4	5	....	....
1869.....		10	8	14	28	9	7	9	8	6	2	....
1870.....		15	13	28	39	16	20	7	7	6	1	....
1871.....		13	10	20	28	18	16	9	4	5	2	....
1872.....		17	18	34	54	20	9	12	11	3	1	....
1873.....		27	12	34	31	25	13	13	7	8	2	....
1874.....		10	14	26	32	9	5	10	3	6	2	....
1875.....		23	14	19	43	18	10	10	6	4	....	....
1876.....		21	10	15	24	14	9	6	16	6	3	2
1877.....		22	13	13	36	20	8	5	7	2	2	1
1878.....		17	16	27	47	13	11	12	2	3	2	....
1879.....		19	7	14	26	15	6	3	12	8	3	1
1880.....		25	12	24	43	23	12	10	5	3	....	1
1881.....		25	9	19	27	14	11	9	12	11	4	....
1882.....		24	22	44	69	27	14	9	10	9	1	....
1883.....		36	25	46	75	31	12	11	10	8	2	2
1884.....		24	13	19	47	22	9	12	10	5	3	1
1885.....		35	12	16	25	26	11	11	12	6	4	....
1886.....		29	9	25	41	20	14	17	8	5	1	....
1887.....		24	8	16	31	16	10	5	8	4	4	1
1888.....		27	27	42	75	29	16	12	3	4	....	....
1889.....		18	12	29	41	18	8	9	5	3	....	....
1890.....		13	11	13	35	14	5	6	6	4	....	....
Totals.....		557	336	637	1041	488	285	252	201	141	43	10

TABLE LXXVII.

Comparative Exhibit of the Percentage of Deaths from Typhoid Fever, to Total Deaths from Specified Causes, in Four New England States, for fifteen years, 1876-1890.

	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890
Rhode Island.....	3.0	3.0	3.4	2.7	3.4	2.8	4.7	4.8	3.2	2.9	2.9	2.0	3.6	2.2	1.54
Massachusetts.....	2.7	2.7	2.3	1.9	2.5	2.9	2.9	2.3	2.4	2.0	2.1	2.3	2.2	2.2	...
Connecticut.....	3.6	3.3	2.7	1.8	2.5	2.5	3.1	2.1	2.5	1.1	2.2	1.2	2.2	2.2	....
Vermont.....	4.2	4.8	3.4	2.7	3.5	5.5	3.4	3.1	....	....	2.5	2.5	....	....	....

DISEASES OF THE HEART.

The number of decedents from the various forms of diseases of the heart, as reported in 1890, was 405. The number is 55 less than that of 1889.

Sex.—There were 222 male decedents, and 183 female decedents ; a proportion of about 120 males to every 100 females.

Parentage.—Of the 405 decedents from diseases of the heart, in 1890, there were 219 of native parentage, and 186 of foreign, a proportion of about 120 of native parentage to every 100 of foreign. It is in accordance with the invariable rule of the whole period of registration, that the native population is more subject to heart diseases than the foreign.

There was not only a less number of deaths from this cause, in 1890, than in the previous year, but also a considerably less ratio to whole number of deaths.

The following Table exhibits for each of the last twenty-six years, 1865 to 1890, inclusive, the number and percentage, and the sex and parentage of the decedents from diseases of the heart, and the number of the same in each division of the State :

TABLE LXXVIII.

Mortality from Diseases of the Heart, 1865 to 1890, inclusive.

YEARS.	Total Number.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	570	3.67	309	262	394	177	24	43	48	176	250	30
1870.....	117	3.61	77	40	77	40	4	10	8	35	59	1
1871.....	144	4.30	78	66	91	53	4	7	8	42	77	6
1872.....	189	4.25	104	85	119	70	5	9	10	59	93	13
1873.....	189	4.29	83	106	122	67	4	11	14	48	101	11
1874.....	214	5.06	109	105	150	64	6	6	28	50	106	18
1870-1874.....	853	4.38	451	402	559	294	23	43	68	234	436	49
1875.....	186	4.31	84	102	113	73	2	13	22	49	88	12
1876.....	166	4.03	86	80	109	57	9	11	10	38	86	12
1877.....	182	4.09	94	88	110	72	3	7	9	57	93	13
1878.....	166	3.73	88	78	109	57	5	11	15	38	83	14
1879.....	202	4.78	114	88	127	75	8	20	16	38	111	9
1875-1879.....	902	4.14	466	436	568	334	27	62	72	220	461	60
1880.....	231	5.03	125	106	146	85	9	21	29	59	104	9
1881.....	204	5.65	131	133	154	110	9	21	24	73	121	16
1882.....	255	5.31	116	139	162	93	8	16	23	55	142	11
1883.....	325	6.20	167	158	179	146	8	27	30	70	172	18
1884.....	285	5.60	135	150	163	122	6	16	25	87	139	12
1880-1884.....	1,360	5.36	674	686	804	556	40	101	131	344	678	66
1885.....	349	6.48	162	187	198	151	13	27	25	94	159	31
1886.....	330	5.20	152	178	184	146	12	20	18	82	168	30
1887.....	406	6.40	205	201	240	166	7	21	36	123	193	26
1888.....	436	6.56	196	240	240	196	11	22	40	122	210	31
1889.....	460	7.35	233	227	258	202	19	31	39	143	199	29
1885-1889.....	1,981	6.51	948	1,033	1,120	861	62	121	158	564	929	147
1890.....	405	5.84	222	183	219	186	15	49	27	114	172	28
Total, 26 years.	6,072	6.45	3,070	3,002	3,664	2,408	191	419	504	1,652	2,926	380

* Providence city not included.

Sex.—Of the 6,072 persons deceased from diseases of the heart, in the last twenty-six years, 3,070 were males, and 3,002 were females ; or 102 males to each 100 females.

Parentage.—Of the 6,072 decedents, during twenty-six years, 3,664 were of native parentage, and 2,408 of foreign. The proportions would, therefore, stand as follows : To every 100 of foreign parentage there were about 152 of native ; or about 60 native and 40 of foreign parentage in every 100 deaths.

The following Table shows the number of decedents from diseases of the heart, in each divisional period of life, in each of the last twenty-six years :

TABLE LXXIX.

Mortality from Diseases of the Heart, in Age Periods.

YEARS.	Under 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Not stated.
1865.....	14	4	6	7	22	17	19	9	...
1866.	18	8	14	17	10	23	21	4	.....
1867.....	11	11	10	13	22	16	27	4	.....
1868.....	15	5	13	11	14	28	25	5	.....
1869.	21	4	14	18	20	22	21	7	1
1870.	19	6	11	13	20	21	23	3	1
1871.....	9	12	10	19	23	36	28	6	1
1872.....	27	12	22	19	31	36	29	13	.....
1873.....	19	11	28	18	25	35	42	9	2
1874.....	20	16	26	21	27	50	40	12	2
1875.....	14	16	25	20	32	29	41	9	.....
1876.....	14	10	15	19	20	38	39	10	1
1877.....	15	11	20	18	27	45	33	13	.....
1878.....	16	8	18	16	26	36	35	11	.....
1879.....	19	9	13	25	33	51	36	16	.....
1880.....	15	10	18	23	33	49	49	28	1
1881.....	32	13	26	23	37	49	53	21	.....
1882.....	22	17	24	25	36	51	61	17	2
1883.....	39	13	21	33	52	65	76	26	.....
1884.....	15	25	21	32	45	61	50	32	4
1885.....	38	13	24	42	61	69	78	24	.....
1886.....	39	18	28	38	52	68	69	18	.....
1887.....	52	30	23	35	61	79	87	39	.....
1888.....	39	25	30	54	84	97	74	33	.....
1889.....	45	25	37	45	69	85	118	25	1
1890.....	34	15	24	53	69	78	96	36	.....
Total, 26 years.....	621	317	421	667	956	1,234	1,270	440	16

The results of twenty-six years of registration, with record of ages of decedents from diseases of the heart, show in periods of twenty years each of life, the following percentages :

Under 20 years of age.....	10.2 per cent.
Between 20 and 40.....	12.8 per cent.
Between 40 and 60.....	26.7 per cent.
Between 60 and 80.....	41.1 per cent.
Over 80.....	9.2 per cent.
	<hr/> 100.0 per cent.

It will be seen that more than 41 per cent. of all the deaths from diseases of the heart were of persons over sixty years of age, and under eighty.

Diseases of the heart have acquired large importance as a cause of death. From 28.8 in every 1,000 deaths from all causes, in 1865, heart diseases gradually increased to about 73 in every 1,000, in 1889, and falling back to less than 60 per thousand in 1890.

INSANITY.

There were 30 deaths from insanity, in 1890, an increase of 8 from 1889. The percentage to the whole number of deaths was less than one-half of one per cent. The percentage during the last two years has been less than the average of the fifteen years preceding 1880. These deaths occurred chiefly at the Cranston institutions, and in the Butler hospital.

Sex.—There were 19 male and 11 female decedents.

Parentage.—The number of native decedents from insanity was 16, and of foreign parentage 14.

The following Table shows the mortality in the State from insanity, for twenty-six years, with percentage to deaths from all causes, sex, parentage, etc., from 1865 to 1890, inclusive :

TABLE LXXX.
Mortality in the State from Insanity.

YEARS.	Number of Deaths from Insanity.	Percentage.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869	74	.49	36	38	55	19	...	8	3	7	54	2
1870.....	18	.55	6	12	13	5	.....	.....	1	2	15	.....
1871.....	16	.45	11	5	13	3	.....	.....	1	4	11	.....
1872.....	26	.61	11	15	16	10	3	.....	1	12	10	.....
1873.....	19	.45	8	11	11	8	.....	.....	2	5	12	.....
1874.....	13	.32	7	6	11	2	.....	1	.....	3	9	.....
1870-1874.....	92	.48	43	49	64	28	3	1	5	26	57	.....
1875.....	32	.78	18	14	25	7	.....	1	4	9	16	2
1876.....	12	.28	5	7	9	3	1	2	1	1	6	1
1877.....	19	.49	9	10	9	10	.....	1	.....	5	12	1
1878.....	22	.50	5	17	16	6	.....	.....	1	3	17	1
1879.....	17	.40	11	6	10	7	.....	.....	.....	5	11	1
1875-1879.....	102	.49	48	54	69	33	1	4	6	23	62	6
1880.....	19	.39	9	10	13	6	.....	1	2	6	9	1
1881.....	32	.63	15	17	22	10	1	1	3	10	16	1
1882.....	23	.45	9	14	18	5	.....	1	.....	8	12	2
1883.....	29	.55	12	17	17	12	1	2	.....	7	18	1
1884.....	36	.69	17	19	24	12	2	3	.....	21	9	1
1880-1884.....	139	.54	62	77	94	45	4	8	5	52	64	6
1885.....	35	.67	16	19	18	17	.....	.....	2	23	10	.....
1886.....	49	.83	21	28	28	21	3	1	1	37	7	.....
1887.....	64	1.01	35	29	33	31	1	.....	1	56	.....	6
1888.....	43	.64	21	22	24	19	1	2	.....	33	7	.....
1889.....	22	.35	14	8	12	10	.....	.....	.....	14	8	.....
1885-1889.....	213	.70	107	106	115	98	5	3	4	163	32	6
1890.....	30	.44	19	11	16	14	1	1	1	13	14	.....
Total, 26 years..	650	.54	315	335	413	237	14	25	24	284	283	20

* Providence city not included.

INFLUENZA.

The very extraordinary and perhaps unprecedented prevalence of a form of influenza, unlike that of ordinary occurrence in that it affected indiscriminately all the functions and nearly all the organs of the body varying with the individuals attacked, warrants a special notice not usually given in the Registration Reports to the affection so named.

Extending over the greater part of Europe and North America, it attacked, probably, not less than 25 per cent. of the entire population of those countries.

The disease was, however, most largely confined to the respiratory passages, and resulted in a largely increased mortality from bronchitis and consumption.

The number of cases of death reported during the first three months of the year as having been caused by the influenza primarily, and secondarily by inflammation or congestion of the respiratory organs, were as follows :

JANUARY.		FEBRUARY.		MARCH.	
<i>Pneumonia.</i>		<i>Pneumonia.</i>		<i>Pneumonia.</i>	
Whole number.....	134	Whole number.....	63	Whole number.....	70
Following influenza	76	Following influenza.....	22	Following influenza.....	9
<i>Bronchitis.</i>		<i>Bronchitis.</i>		<i>Bronchitis.</i>	
Whole number	42	Whole number.....	21	Whole number.....	36
Following influenza.....	22	Following influenza.....	7	Following influenza.....	7

It will be seen by the above that the mortality from pneumonia and bronchitis in January, 1890, was caused primarily in considerably more than one half of the cases by the influenza, and during the first quarter of the year, by about thirty-six per cent. of the cases.

There were 168 deaths reported, in 1890, as resulting from influenza proper and idiopathically.

Sex.—Of the 168, 72 were males and 96 were females, a proportion of 75 males to every 100 females.

Parentage.—The parent nativity of the decedents was 68 of native and 100 of foreign.

Season.—Of the 168 deaths from influenza, during 1890, 146 occurred in the first quarter of the year as follows : January, 108 ; February, 27 ; March, 11.

Age.—There were 32 under 5 years of age, 12 from 5 to 20 years, 36 from 20 to 40, 35 from 40 to 60, 36 from 60 to 80, and 17 from 80 years of age and over.

DISEASES OF THE KIDNEYS.

There were 229 deaths returned, during 1890, with diseases of the kidneys assigned as the cause.

Sex.—Of the 229, there were 116 males and 113 females, or about 103 males to every 100 females, which is more nearly equal than the average proportion during a period of twenty-five years.

Parentage.—There were 109 of native parentage, and 120 of foreign, or about 90 of native to every 100 of foreign parentage.

For the first time in twenty-six years have the decedents from diseases of the kidneys, of foreign parentage, outnumbered those of native parentage.

Age.—Of the 229 decedents from kidney diseases, 7 were under five years of age, 10 from five to twenty, 43 from twenty to forty, 87 from forty to sixty, 73 from sixty to eighty, and 9 eighty and over.

Diseases of the kidneys have largely increased in number, and much larger still in proportion, during the last twenty-six years.

During the ten years from 1865 to 1874, inclusive, the proportion of deaths from kidney diseases, to whole number of deaths from all causes, was but little more than one per cent., while during the ten years from 1880 to 1889, inclusive, the proportion was nearly two and one-half per cent.

The following Table will present various facts in relation to the mortality from diseases of the kidneys, in Rhode Island, for twenty-six years, 1865–1890 :

TABLE LXXXI:

Mortality in the State from Kidney Diseases, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality for twenty-six years, from 1865 to 1890, inclusive.

YEARS.	Number of Deaths from Kidney Diseases.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	117	.76	83	34	80	37	6	4	19	23	57	8
1870.....	31	.96	23	8	21	10	1	3	6	5	14	2
1871.....	43	1.39	27	16	31	12	2	3	3	10	21	4
1872.....	55	1.42	30	25	29	26	4	2	2	11	34	2
1873.....	66	1.57	38	28	40	26	.....	3	5	19	31	8
1874.....	66	1.62	36	30	41	25	4	3	3	11	44	1
1870-1874.....	261	1.34	154	107	162	99	11	14	19	56	144	17
1875.....	65	1.58	36	29	46	19	1	.....	4	16	42	2
1876.....	50	1.28	22	28	32	18	1	1	7	10	28	3
1877.....	67	1.57	40	27	35	32	2	1	.....	14	49	1
1878.....	80	1.89	50	30	49	31	4	3	3	21	47	2
1879.....	79	1.88	51	28	44	35	1	3	1	23	43	8
1875-1879.....	341	1.56	199	142	206	135	9	8	15	84	209	16
1880.....	91	2.02	52	39	51	40	1	5	10	27	46	2
1881.....	79	1.69	40	39	47	.....	7	5	4	14	48	1
1882.....	86	1.79	50	36	45	41	2	5	10	15	52	2
1883.....	129	2.43	72	57	74	55	5	2	17	37	60	8
1884.....	118	2.29	53	65	66	52	5	11	12	28	54	8
1880-1884.....	503	1.98	267	236	283	220	20	28	53	121	260	21
1885.....	159	2.97	92	67	86	73	8	10	17	31	88	5
1886.....	155	2.49	85	70	93	62	3	10	22	37	71	12
1887.....	169	2.66	92	77	90	79	5	6	16	43	92	7
1888.....	213	3.23	102	111	122	91	10	10	24	46	115	8
1889.....	210	3.38	119	91	122	88	14	13	15	62	96	10
1885-1889.....	906	2.94	490	416	513	393	40	49	94	218	462	42
1890.....	229	3.20	116	113	109	120	15	8	21	59	116	10
Total, 26 years.	2,357	1.80	1,209	1,048	1,353	1,004	101	111	221	562	1,248	114

* Providence city not included.

DISEASES OF THE LIVER.

There were 65 deaths reported, in 1890, as having been caused by structural diseases of the liver.

Of the 65 decedents there were 42 males and 23 females ; or about the proportion of 180 males to every 100 females.

There were 29 of native parentage and 36 of foreign ; or about 80 of native to every 100 of foreign.

Four-fifths of the whole number were of persons of forty years of age and over.

Forty of the 65 deaths from diseases of the liver occurred during the last half of the year.

TABLE LXXXII.

Percentage to Whole Number of Deaths, Sex, Parentage and Locality of Decedents from Diseases of the Liver, 1865-1890.

YEARS.	Number of Deaths.		SEX.		PARENTAGE.		STATE DIVISIONS.					
	Per cent.		Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	183	1.19	103	80	122	61	14	11	33	42	67	16
1870.....	45	1.23	17	28	29	16	.....	4	7	15	12	7
1871.....	35	1.13	18	17	19	16	4	4	2	6	15	4
1872.....	35	.82	18	17	17	18	2	3	3	11	15	1
1873.....	45	1.02	20	25	26	19	4	2	1	18	16	4
1874.....	40	.95	21	19	26	14	3	3	3	11	16	4
1870-1874.....	200	1.03	94	106	117	83	13	16	16	61	74	20
1875.....	47	1.09	26	21	19	28	5	2	3	10	26	1
1876.....	45	1.09	26	19	27	18	1	5	5	11	18	5
1877.....	52	1.17	23	29	31	21	1	.....	7	16	24	4
1878.....	49	1.10	25	24	32	17	8	1	6	14	18	2
1879.....	52	1.24	27	25	31	21	4	4	2	14	22	6
1875-1879.....	245	1.14	127	118	140	105	19	12	23	65	108	18
1880.....	58	1.27	29	29	40	18	4	3	8	15	25	3
1881.....	46	.92	30	16	21	25	2	2	6	8	24	4
1882.....	62	1.22	34	28	36	26	3	5	10	17	24	3
1883.....	51	.94	27	24	20	31	5	6	4	16	18	2
1884.....	48	.93	22	26	23	25	5	3	5	2	31	2
1880-1884.....	265	1.06	142	123	140	125	19	19	33	58	122	14
1885.....	61	1.13	24	37	32	29	2	6	6	21	24	2
1886.....	54	.92	29	25	26	28	4	4	4	14	28	.....
1887.....	86	1.35	40	46	38	48	3	5	3	31	39	5
1888.....	68	1.03	38	30	36	32	1	5	6	28	26	2
1889.....	70	1.12	30	40	31	39	1	2	10	26	29	2
1885-1889.....	339	1.11	161	178	163	176	11	22	29	120	146	11
1890.....	65	.94	42	23	29	36	3	4	6	21	26	5
Total, 26 years.	1,297	1.10	669	628	711	586	79	84	140	367	543	84

* Providence city not included.

DROPSY.

During 1890 there were 46 deaths returned as having been caused by dropsy.

Although this term is a misnomer in a large measure and conveys no definite idea of the pathological condition preceding the dropsical accumulation, it is, nevertheless, the only cause returned, and as it is in some instances the immediate cause of death, it is given a place in the Registration Reports; and as a frequent result and concomitant of diseases of the kidneys and liver, it has been placed in comparison with them in the following Table.

Of the 46 decedents from dropsy, 18 were males and 28 were females.

The female decedents from dropsy are in nearly every year, in a considerable number, in excess of the male decedents.

Of the parentage, 22 were of native and 24 of foreign parentage.

TABLE LXXXIII.

Mortality from Kidney and Liver Diseases compared with Dropsy (so returned) for thirty-eight years—1853 to 1890.

YEARS.	DEATHS FROM KIDNEY DISEASES			DEATHS FROM LIVER DISEASES			TOTAL DEATHS FROM KIDNEY AND LIVER DISEASES.			DEATHS FROM DROPSY.			Excess or Diminution of Dropsy in reference to Kidney and Liver Diseases.	Per cent. of Deaths from Dropsy to all.
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.		
1853-1857.	26	20	6	51	28	23	77	48	29	208	89	119	+131	2.21
1858-1862.	71	38	33	168	87	81	239	125	114	270	113	157	+31	2.07
1863-1867.	99	69	30	191	104	87	290	173	117	371	169	202	+81	2.10
1868-1872.	185	119	66	183	92	91	368	211	157	274	126	148	-94	1.62
1873-1877.	314	172	142	229	116	113	543	288	255	284	125	159	-259	1.32
1878.....	81	51	30	49	25	24	130	76	54	38	21	17	-92	.86
1879.....	81	52	29	52	27	25	133	79	54	50	26	24	-83	1.12
1880.....	91	52	39	58	29	29	149	81	68	37	15	22	-112	.77
1881.....	79	40	39	46	30	16	125	70	55	47	23	24	-78	.94
1882.....	88	47	41	62	34	28	150	81	69	50	22	28	-100	.99
1878-1882.	420	242	178	267	145	122	687	387	300	222	107	115	-465	.94
1883.....	117	67	50	51	27	24	168	94	74	47	21	26	-131	.89
1884.....	133	58	75	52	24	28	185	82	103	40	20	20	-145	.78
1885.....	168	95	73	61	24	37	229	119	110	44	30	14	-185	.82
1886.....	162	91	72	71	38	33	231	129	102	49	20	29	-185	.84
1887.....	169	92	77	86	40	46	255	132	123	35	14	21	-220	.55
1883-1887.	750	403	347	321	153	168	1,071	556	515	215	105	110	-856	.78
1888.....	213	102	111	68	38	30	281	140	141	48	18	30	-233	.73
1889.....	210	119	91	70	30	40	280	149	131	42	14	28	-238	.60
1890.....	229	116	113	65	42	23	294	158	136	46	18	28	-248	.67
Totals....	2,517	1,400	1,117	1,613	835	778	4,130	2,235	1,895	1,960	884	1,066	-2,150	1.55

MEASLES.

There were 92 decedents from measles as a cause of death in 1890.

Of the 92 there were 45 males and 47 females. The sexes seem to be nearly equally susceptible to measles and to mortality therefrom.

Of parentage there were 42 of native and 50 of foreign.

During the last ten years the proportion of mortality from measles has been about 63 of native to every 100 of foreign parentage.

During 1890, the number of decedents under five years of age was 80.

The number in the different divisions of the State may be found in Table LX, on page 170.

TABLE LXXXIV.

Mortality in the State from Measles—1865-1890.

YEARS.	Total Deaths.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.....	16	.47	6	10	4	12	.....	1	.....	8	7	.....
1866.....	15	.53	7	8	5	10	.....	1	2	3	9	.....
1867.....	12	.42	2	10	2	10	.....	.....	1	11	.....	.....
1868.....	20	.70	10	10	3	17	.....	1	9	6	4	.....
1869.....	19	.56	13	6	6	13	6	1	.....	6	6	.. ..
1865-1869.....	82	.54	38	44	20	62	6	4	12	34	26	.....
1870.....	26	.84	12	14	10	16	.....	1	.....	9	16	.....
1871.....	6	.19	1	5	3	3	.....	.....	1	4	1	.....
1872.....	24	.62	7	17	11	13	2	7	.....	10	3	2
1873.....	63	1.43	30	33	33	30	3	5	5	23	27	.....
1874.....	7	.17	4	3	6	1	.....	.....	1	.....	4	2
1870-1874.....	126	.65	54	72	63	63	5	13	7	46	51	4
1875.....	2	.05	1	1	.....	2	.....	.....	.....	2	.....	.....
1876.....	4	.10	.....	4	1	3	.....	.....	.....	4	.....	.....
1877.....	11	.25	3	8	2	9	.....	.....	1	8	2	.....
1878.....	81	1.82	39	42	25	56	2	3	.....	26	50	.....
1879.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1875-1879.....	98	.44	43	55	28	70	2	3	1	40	52	.....
1880.....	9	.20	3	6	2	7	.....	.....	.....	6	3	.....
1881.....	37	.74	17	20	15	22	.....	1	2	9	25	.....
1882.....	6	.12	1	5	.....	6	.....	.....	.....	2	4	.....
1883.....	14	.27	11	3	9	5	.....	1	.....	3	8	2
1884.....	18	.35	10	8	5	13	1	6	1	3	7	.....
1880-1884.....	84	.33	42	42	31	53	1	8	3	23	47	2
1885.....	45	.84	27	18	19	26	.....	7	2	27	8	1
1886.....	18	.30	11	7	4	14	.....	5	.....	4	9	.....
1887.....	132	2.08	69	63	57	75	.....	5	8	26	90	3
1888.....	11	.22	5	6	3	8	.....	2	.....	7	2	.....
1889.....	29	.47	15	14	10	19	.....	8	.....	7	14	.....
1885-1889.....	235	.77	127	108	93	142	.....	27	10	71	123	4
1890.....	92	1.32	45	47	42	50	2	10	.....	41	31	8
Total, 26 years..	717	.58	349	368	277	440	16	65	33	255	330	18

* Providence city not included.

OLD AGE.

The number of deaths, in 1890, attributed to old age as a cause, was 198.

This is a smaller number than has been returned from that cause in any year since 1867, when the proportion to whole number of specified causes of death was 6.98 per centum, as against 2.87 in 1890.

It should be stated, however, that the physicians' certificates of causes of death in later years, are more definite in stating the specific cause, as "debility," "heart failure," "innutrition," "indigestion," etc., which will account in part for the apparently lessened number.

Of the 198 decedents from old age, 72 were males and 126 were females, or about 60 males to every 100 females, which is about the average proportion during the whole period of registration in Rhode Island.

Of the parentage of the 198, there were 123 of native and 75 of foreign parentage, or 164 of native to every 100 of foreign.

The following Table will present the statistics of deaths in Rhode Island from old age, for twenty-six years :

TABLE LXXXV.

Mortality in the State from Old Age, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality, for twenty-six years, from 1865 to 1890, inclusive.

YEARS.	Number of Deaths from Old Age.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	946	6.53	349	597	728	218	49	91	157	262	269	118
1870.....	204	6.58	77	127	155	49	10	24	24	59	51	36
1871.....	232	7.44	94	138	173	59	14	24	34	56	70	34
1872.....	233	6.02	93	140	173	60	10	14	26	75	69	39
1873.....	354	6.07	107	147	177	77	14	22	39	71	79	29
1874.....	223	5.46	80	143	160	63	14	20	29	61	71	28
1870-1874.....	1,146	6.32	451	695	838	308	62	104	152	322	310	166
1875.....	216	5.25	93	123	150	66	9	23	33	69	59	23
1876.....	241	6.18	107	134	177	64	12	14	38	65	71	41
1877.....	213	5.00	96	117	145	68	12	23	29	57	63	29
1878.....	222	5.25	84	138	172	50	15	8	32	76	61	30
1879.....	220	5.22	82	138	152	68	14	19	26	69	67	25
1875-1879.....	1,112	5.38	462	650	796	316	62	87	158	336	321	148
1880.....	273	5.95	121	152	186	87	12	20	34	90	73	44
1881.....	247	5.29	101	146	167	80	12	24	36	93	72	10
1882.....	283	5.89	110	173	190	93	20	25	40	106	79	13
1883.....	275	5.22	105	170	184	91	17	18	41	91	84	21
1884.....	293	5.68	101	192	196	97	16	20	39	106	86	26
1880-1884.....	1,371	5.60	538	833	923	448	77	107	193	486	394	114
1885.....	267	4.95	86	181	183	84	9	32	47	87	70	22
1886.....	276	4.69	101	175	181	95	16	24	36	100	73	27
1887.....	278	4.38	103	175	167	111	17	19	29	109	76	28
1888.....	290	4.35	108	182	198	92	16	26	25	124	64	35
1889.....	227	3.63	75	152	136	91	10	23	23	73	71	27
1885-1889.....	1,338	4.40	473	865	865	473	68	124	160	493	354	139
1890.....	198	2.87	72	126	123	75	16	19	19	59	63	22
Total, 26 years	6,111	5.58	2,345	3,766	4,273	1,838	331	532	839	1,958	1,741	707

* Providence city not included.

PERITONITIS.

There were 63 deaths which were caused by peritonitis, during 1890.

Sex.—Of the 63 decedents from peritonitis there were 24 males and 39 females, a proportion of nearly 162 females to every 100 males.

Parentage.—There were 28 of native parentage and 35 of foreign, or a ratio of 125 foreign to every 100 of native parentage.

Season.—The seasons did not have a notable influence in regard to the mortality from peritonitis.

PNEUMONIA.

There were 569 decedents from pneumonia, in 1890. The number is 86 more than in 1889.

The proportion to whole number of deaths was 8.2 per hundred.

Sex.—Of the 569 decedents from pneumonia, and including congestion of the lungs, 288 were males and 281 were females; or about an equal proportion.

Parentage.—By parentage there were 247 of native and 322 of foreign parentage. The proportion of decedents from pneumonia was about 77 of native to each 100 of foreign parentage.

Season.—There were 326, or nearly 60 per cent., of the deaths that occurred during the first four months of the year. The largest mortality by months was 134 in January, 70 in March, 63 in February, and 59 in April.

Pneumonia, as a cause of death, has increased in the ratio to whole number of deaths, during the last twenty-five years, from an average of 5.8 per cent., during the first ten years, to an average of 7.6 per cent. during the last ten.

The following Table presents, for each of the last twenty-six years, the number and the percentage, with the sex and the parentage of the decedents from pneumonia; and the number in each year, in each division of the State:

TABLE LXXXVI.

Mortality in the State from Pneumonia, 1865 to 1890, inclusive.

YEARS.	Whole Number.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.....	175	5.1	80	95	110	65	8	11	21	49	74	12
1866.....	193	6.5	94	99	127	66	13	17	13	59	81	10
1867.....	172	5.9	68	104	103	69	8	12	12	56	68	16
1868.....	191	6.6	99	92	120	71	9	5	16	54	92	15
1869.....	190	5.6	104	86	110	80	7	10	10	63	88	12
1865-1869.....	921	5.9	445	476	570	351	45	55	72	281	403	65
1870.....	182	5.6	102	80	96	86	6	12	15	55	78	16
1871.....	218	6.5	104	114	129	89	12	21	11	68	85	21
1872.....	229	5.4	119	110	125	104	11	1	9	74	120	14
1873.....	234	5.3	127	107	143	91	11	9	10	65	123	16
1874.....	250	5.9	118	132	143	107	6	13	7	73	136	15
1870-1874.....	1,113	5.7	570	543	636	477	46	56	52	335	542	82
1875.....	400	9.3	199	201	243	157	14	27	25	105	198	31
1876.....	339	8.2	164	175	162	177	13	23	16	97	163	27
1877.....	226	5.1	104	122	127	99	10	7	14	81	98	16
1878.....	317	7.1	143	174	176	141	10	11	18	110	140	28
1879.....	311	7.4	148	163	163	148	7	15	15	103	156	15
1875-1879.....	1,593	7.3	758	835	871	722	54	83	88	496	755	117
1880.....	364	7.9	180	184	177	187	26	16	18	92	192	20
1881.....	327	6.5	177	150	190	137	10	23	17	81	174	22
1882.....	344	7.2	178	166	163	181	10	22	24	91	176	21
1883.....	400	7.8	192	208	198	202	19	21	34	108	204	14
1884.....	363	7.1	167	196	192	171	10	13	17	125	172	26
1880-1884.....	1,798	7.1	894	904	920	878	75	95	110	497	918	103
1885.....	465	8.6	214	251	271	194	15	20	33	151	227	19
1886.....	491	8.2	232	249	234	247	17	29	37	161	209	28
1887.....	488	7.7	260	228	227	261	13	27	39	142	227	40
1888.....	508	7.7	271	234	227	281	16	37	29	171	219	36
1889.....	483	7.7	255	228	213	270	18	37	29	169	208	22
1885-1889.....	2,425	8.0	1,235	1,190	1,172	1,253	79	150	167	794	1,090	145
1890.....	569	8.2	288	281	247	322	16	36	30	206	246	85
Total, 26 years...	8,419	8.0	4,190	4,229	4,416	4,003	315	475	519	2,609	3,954	547

* Not including Providence city.

TABLE LXXXVII.

Exhibiting the Number of Decedents from Pneumonia, in each of the several Periods of Life, during each of the last twenty-six years, from 1865 to 1890, inclusive.

YEARS.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Not stated.
1865.....	65	4	2	....	14	11	15	17	21	21	5	....
1866.....	57	4	4	5	12	10	14	21	25	32	9	....
1867.....	57	9	2	3	10	11	13	16	25	13	12	1
1868.....	70	4	3	3	15	8	16	13	19	27	13	....
1869.....	64	11	1	2	11	12	9	28	25	16	11	....
1870.....	84	6	5	4	6	7	8	14	20	19	8	1
1871.....	71	7	2	7	10	17	16	16	35	17	19	1
1872.....	83	5	1	7	17	20	19	22	24	19	11	1
1873.....	105	4	8	3	10	14	16	17	24	23	10	....
1874.....	76	9	4	6	17	17	25	21	40	27	8	....
1875.....	120	9	3	8	22	30	35	39	61	43	28	2
1876.....	116	5	4	3	20	20	32	35	48	39	17	....
1877.....	79	2	....	7	15	15	24	27	22	24	9	2
1878.....	115	9	4	10	14	17	28	20	42	45	13	....
1879.....	102	8	1	3	14	27	26	35	38	38	9	..
1880.....	95	18	3	16	14	33	37	46	47	43	12	....
1881.....	102	*4	2	5	15	22	26	45	48	31	26	1
1882.....	71	3	4	14	22	36	49	33	41	46	21	4
1883.....	88	15	2	13	32	33	40	53	49	46	27	2
1884.....	103	14	5	11	23	34	24	32	53	37	23	4
1885.....	121	9	10	8	23	29	50	49	76	59	29	2
1886.....	111	10	7	19	32	35	50	58	74	55	30	....
1887.....	132	15	7	7	32	43	51	56	64	53	28	....
1888.....	103	20	5	15	49	48	61	62	70	54	21	....
1889.....	120	14	3	20	27	36	51	57	77	47	31	....
1890.....	161	7	10	12	46	55	55	55	79	54	33	2
Totals, 26 years.....	2,471	225	82	211	526	640	790	887	1,147	928	473	23

Age.—Of the decedents from pneumonia, during the period of twenty-six years, nearly one-third were under five years of age. Of over fifty years of age the number of decedents was about 40 per cent. of the whole number.

The following summary will present the percentages in round numbers :

Under five years of age.....	31 per cent.
Five years and under twenty.....	6 per cent.
Twenty years and under fifty.....	23 per cent.
Fifty years and over.....	40 per cent.

SCARLATINA.

The number of deaths returned as having been caused by scarlatina, in 1890, was 16. The number is 35 less than in 1889, and less than in any year since 1867.

Sex.—Of the 16 decedents from scarlatina 11 were males and 5 were females; or about 50 females to every 100 males.

Parentage.—There were 6 of native parentage, and 10 of foreign; a proportion of about 166 of foreign parentage to every 100 of native.

The following Table will present the statistics of scarlatina for the last thirty-six years, from 1855 to 1890, inclusive, the number and percentage and sex of the decedents from scarlatina, and the number from scarlatina in each division of the State. It also shows, from 1865 to 1890, inclusive, the *parentage* of the decedents from scarlatina:

TABLE LXXXVIII.

Mortality in the State from Scarlet Fever, 1855 to 1890, inclusive.

YEARS.	Whole Number.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
10 yrs., 1855-1864	1,256	4.9	611	645	.....	.....	46	62	189	334	568	57
5 yrs., 1865-1869	676	4.3	324	352	316	360	58	43	27	206	309	33
1870.....	75	2.3	37	38	28	47	1	6	3	22	35	8
1871.....	66	1.9	41	25	31	35	1	3	1	27	21	13
1872.....	53	1.2	22	31	22	31	.....	1	4	27	19	2
1873.....	287	6.5	124	163	163	124	4	2	42	80	132	27
1874.....	462	10.9	231	231	176	286	27	17	1	133	268	16
1870-1874.....	913	4.9	455	488	420	523	33	29	51	289	475	66
1875.....	185	4.3	85	100	121	64	8	30	3	35	94	15
1876.....	80	1.9	34	46	42	38	3	2	7	21	35	12
1877.....	62	1.4	26	36	29	33	14	4	3	21	12	8
1878.....	86	1.9	41	45	35	51	3	5	3	14	47	4
1879.....	311	7.4	164	147	130	181	3	6	4	37	255	6
1875-1879.....	724	3.3	350	374	357	367	31	47	20	128	453	45
1880.....	468	10.0	215	253	216	252	22	30	11	143	243	19
1881.....	138	3.0	79	59	62	76	11	25	12	41	45	4
1882.....	45	0.9	24	21	16	29	.....	3	16	7	18	1
1883.....	34	0.6	17	17	14	20	1	1	5	9	16	2
1884.....	97	1.8	39	58	41	56	.....	.....	8	28	57	4
1880-1884.....	782	3.1	374	408	349	433	34	59	52	228	379	30
1885.....	91	1.7	36	55	48	43	.....	3	6	24	38	20
1886.....	88	1.5	46	42	29	59	.....	13	2	41	30	2
1887.....	266	4.2	120	146	95	171	9	16	4	80	154	3
1888.....	207	3.1	101	106	91	116	1	29	10	87	80	.....
1889.....	51	0.8	24	27	14	37	3	2	6	14	25	1
1885-1889.....	703	2.4	327	376	277	426	13	63	28	246	327	26
1890.....	16	0.2	11	5	6	10	.....	3	.....	2	8	3
Total, 36 years.	5,100	3.6	2,452	2,648	1,725	2,119	215	306	367	1,433	2,519	260

* Providence city not included.

CROUP, DIPHTHERIA AND SCARLATINA.—*Season and Mortality.*

The following Table is continued, to show by comparison the *influence of season* in regard to the mortality from croup and scarlatina for *thirty-five* years, and diphtheria for *thirty* years. The Table will give the average *monthly* and *quarterly* percentages of deaths from each cause :

TABLE LXXXIX.

MONTHS.	CROUP. 1853-1887.		DIPHTHERIA. 1853-1887.		SCARLATINA. 1853-1887.	
	Number of deaths.	Per cent.	Number of deaths.	Per cent.	Number of deaths.	Per cent.
January.....	328	12.66	365	9.68	646	11.85
February	268	10.34	260	6.88	579	10.63
March.....	220	8.48	270	7.15	530	9.73
First Quarter.....	816	31.48	895	23.71	1,755	32.21
April.....	184	7.09	226	5.90	441	8.10
May.....	128	4.93	242	6.40	481	8.33
June.....	116	4.47	227	6.00	418	7.69
Second Quarter.....	428	16.49	695	18.30	1,340	24.62
July.....	86	3.32	208	5.48	314	5.76
August.....	72	2.77	245	6.38	261	4.79
September.....	162	6.25	272	7.45	269	4.94
Third Quarter... ..	320	12.34	825	19.31	844	15.49
October.....	272	10.40	502	13.29	384	7.04
November	376	14.51	505	13.37	493	9.04
December.....	381	14.69	454	12.02	632	11.60
Fourth Quarter.....	1,029	39.69	1,461	38.68	1,509	27.68
Totals.....	2,593	100.00	3,776	100.00	5,448	100.00

SUICIDE.

The number of deaths by suicide, in Rhode Island, during 1890, was 19, which is 5 less than in the preceding year.

There were 15 male and 4 female decedents from that cause, or a proportion of nearly four males to every one of the females.

Of the 19, twelve were of native parentage and seven of foreign. It is according to the rule of previous years that there was a preponderance of decedents from suicide of native parentage.

The means of self-destruction, according to the returns, were as follows: By arsenic, one male and one female; by coal gas, one male; by cutting the throat, one male and one female; by drowning, two males and one female; by hanging, one male; by morphine, one male; by paris green, one male; by shooting, four males; unspecified, three males and one female.

The proportion of suicides, to all other causes of death in Rhode Island, during 26 years has, in but one quinquennial period, exceeded one-half of one per cent.

Deaths by suicide have been more than 25 per cent. less, during the last ten years, than during the first ten of the twenty-six years, as may be seen in the following Table :

TABLE XC.

Mortality in the State from Suicide, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality, for twenty-six years, from 1865 to 1890, inclusive.

YEARS.	Number of Deaths from Suicide.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	71	.50	54	17	56	15	3	6	5	23	29	5
1870.....	27	.89	23	4	18	9	...	2	2	11	10	2
1871.....	19	.62	14	5	13	6	1	3	1	5	9	...
1872.....	18	.47	10	8	12	6	...	3	4	3	7	1
1873.....	8	.19	6	2	7	1	...	1	...	3	4	...
1874.....	18	.44	14	4	11	7	1	1	1	3	10	2
1870-1874.....	90	.52	67	23	61	29	2	10	8	25	40	5
1875.....	26	.63	17	9	14	12	1	1	...	6	13	5
1876.....	18	.46	15	3	6	12	...	...	1	5	10	2
1877.....	22	.52	16	6	15	7	...	2	1	5	12	2
1878.....	21	.50	16	5	12	9	3	2	...	5	7	4
1879.....	13	.31	10	3	5	8	...	...	...	5	7	1
1875-1879.....	100	.48	74	26	52	48	4	5	2	26	49	14
1880.....	10	.20	5	5	8	2	...	1	1	6	2	...
1881.....	23	.49	19	4	15	8	...	5	3	...	14	1
1882.....	31	.64	23	8	23	8	1	4	3	8	12	3
1883.....	25	.47	18	7	11	14	...	...	2	8	15	...
1884.....	22	.43	20	2	13	9	...	1	1	6	11	3
1880-1884.....	111	.45	85	26	70	41	1	11	10	28	54	7
1885.....	20	.37	16	4	11	9	1	1	6	3	6	3
1886.....	17	.29	16	1	12	5	1	3	2	4	7	...
1887.....	16	.25	13	3	8	8	2	...	2	5	7	...
1888.....	21	.42	20	1	15	6	...	1	3	6	9	2
1889.....	24	.38	20	4	9	15	...	2	5	7	10	...
1885-1889.....	98	.34	85	13	55	43	4	7	18	25	39	5
1890.....	19	.28	15	4	12	7	2	...	1	8	5	3
Total, 26 years.	489	.46	380	109	306	183	16	39	44	135	216	39

* Not including Providence city.

WHOOPIING COUGH.

The number of deaths from whooping cough, returned in 1890, was 70.

Of the 70 decedents from whooping cough, 25 were males and 45 were females, or a proportion of 55 males to 100 females.

There were 25 decedents of native parentage and 45 of foreign, or a proportion of 55 of native to 100 of foreign.

Of the 70 decedents, 65 were under 5 years of age, and the remaining 5 were between 5 and 10 years of age.

Thirty-two, or nearly one-half of the deaths occurred during the first three months of the year.

The following Table will present the mortality from whooping cough, for twenty-six years, 1865-1890 inclusive, with the death-rate, sex, parentage, etc., of the decedents :

TABLE XCI.

Mortality in the State from Whooping Cough, 1865-1890.

YEARS.	Total Deaths.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.....	56	1.63	27	29	23	33	.....	1	3	19	31	2
1866.....	28	1.00	17	11	16	12	.....	3	6	7	8	4
1867.....	12	.45	7	5	6	6	1	.....	3	6	2	.....
1868.....	26	.87	12	14	11	15	.....	2	1	9	13	1
1869.....	48	1.48	23	25	19	29	1	6	4	21	16	.....
1865-1869.....	170	1.09	86	84	75	95	2	12	17	62	70	7
1870.....	39	1.25	19	20	16	23	.....	2	.....	11	24	2
1871.....	25	.81	6	19	5	20	.....	7	.....	8	10	.....
1872.....	27	.69	14	13	15	12	2	2	1	10	10	2
1873.....	32	.76	16	16	15	17	.....	.....	10	4	18	.....
1874.....	45	1.10	14	31	17	28	.....	1	2	14	28	.....
1870-1874.....	168	.86	69	99	68	100	2	12	13	47	90	4
1875.....	31	.72	15	16	12	19	2	1	.....	20	7	1
1876.....	48	1.17	19	29	20	28	5	3	1	7	31	1
1877.....	32	.72	18	14	6	26	.....	.....	1	15	16	.....
1878.....	54	1.22	26	28	30	24	.....	1	.....	9	43	1
1879.....	43	.96	17	26	22	21	.....	11	1	12	15	4
1875-1879.....	208	.96	95	113	90	118	7	16	3	63	112	7
1880.....	20	.41	10	10	7	13	.....	.....	2	6	11	1
1881.....	68	1.36	33	35	30	38	.....	2	2	24	40	.....
1882.....	71	1.40	33	38	32	39	.....	4	.....	26	40	1
1883.....	9	.17	6	3	5	4	1	.....	.....	4	4	.....
1884.....	43	.83	17	26	23	20	5	.....	2	6	28	2
1880-1884.....	211	.83	99	112	97	114	6	6	6	66	123	4
1885.....	42	.79	23	19	24	18	.....	1	4	9	24	4
1886.....	49	.83	28	21	17	32	4	3	.....	18	23	1
1887.....	21	.32	9	12	10	11	.....	.....	4	6	10	1
1888.....	44	.75	17	27	16	28	.....	3	2	11	28	.....
1889.....	77	1.23	39	38	36	41	1	12	1	20	43	.....
1885-1889.....	233	.77	116	117	103	130	5	19	11	64	128	6
1890.....	70	1.00	25	45	25	45	2	2	7	27	30	2
Total, 36 years..	1,060	.92	490	570	458	602	24	67	57	329	553	30

* Providence city not included.

TABLE XCII.

Presenting the ratio of Mortality to the Whole Number of Specified Causes of Death, of twenty-three Prominent Causes, for sixteen years, 1875-1890.

CAUSES OF DEATH.	YEARS.							
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Accidents (all kinds).....	3.31	3.40	3.10	2.89	2.43	3.51	3.04	3.44
Apoplexy and Paralysis.. . .	3.61	4.01	4.25	4.45	5.21	4.67	5.23	5.52
Brain, Diseases of.....	2.98	3.64	3.68	3.28	3.73	3.44	3.84	3.60
Bronchitis.....	1.39	1.46	1.62	1.89	1.47	1.98	1.80	2.08
Cancer.....	2.31	2.72	3.17	2.82	2.96	2.72	3.11	2.75
Cholera Infantum.....	7.71	6.41	6.08	3.97	3.81	5.43	5.15	6.77
Consumption.....	15.79	16.78	15.52	15.98	15.09	14.02	15.12	15.33
Convulsions.....	2.43	2.28	1.95	2.65	2.47	2.88	2.18	2.29
Croup.....	2.33	2.61	2.23	2.20	2.28	1.45	2.16	1.60
Debility*.....	2.61	2.80	2.65	1.91	2.35	3.09	2.61	2.69
Diarrhoea.....	1.70	1.87	2.11	1.25	1.26	1.52	1.65	1.87
Diphtheria.....	.80	4.07	11.56	10.28	6.14	3.40	4.63	2.10
Dysentery.....	.88	1.28	1.22	.95	1.04	.61	.90	1.42
Fevers.....	3.40	3.00	3.55	3.94	2.70	3.37	3.05	4.60
Heart, Diseases of....	4.31	4.03	4.28	3.92	4.78	5.03	5.68	5.31
Hooping Cough.....	.75	1.23	.75	1.28	1.02	.44	1.46	1.48
Hydrocephalus.....	1.34	1.74	1.29	1.65	1.36	1.01	1.20	1.02
Kidneys, Diseases of.....	1.58	1.28	1.57	1.89	1.88	2.02	1.69	1.79
Liver, Diseases of.....	1.14	1.15	1.06	1.06	1.17	1.20	.82	1.21
Marasmus.....	1.46	1.13	.99	1.30	1.16	1.27	1.11	1.62
Old Age.....	5.25	6.18	5.00	5.25	5.22	5.95	5.29	5.89
Pneumonia.....	7.83	8.69	5.31	7.49	7.37	7.90	7.01	7.16
Scarlatina.....	4.50	2.05	1.46	2.03	7.37	9.99	2.96	.94

* Not infantile.

TABLE XCII.—Continued.

CAUSES OF DEATH.	YEARS.							
	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Accidents (all kinds).....	2.84	3.60	3.09	3.22	3.25	3.01	3.46	3.60
Apoplexy and Paralysis.....	5.39	5.78	5.38	5.69	4.17	5.50	5.17	4.91
Brain, Diseases of.....	3.50	2.97	3.61	3.11	3.29	3.43	3.03	3.13
Bronchitis.....	2.04	2.29	3.09	2.96	2.77	3.42	4.20	4.01
Cancer.....	3.30	3.03	3.59	2.77	2.50	2.99	3.03	2.41
Cholera Infantum.....	4.73	6.31	5.16	6.27	5.60	7.08	6.80	8.39
Consumption.....	15.01	14.34	14.45	14.12	11.19	12.13	11.61	12.29
Convulsions.....	2.47	2.70	2.06	2.06	2.51	2.31	2.17	2.24
Croup.....	1.40	1.55	1.74	1.55	1.79	1.19	1.28	1.19
Debility*.....	1.14	2.87	2.45	2.91	1.18	1.38	2.07	1.93
Diarrhœa.....	2.55	2.20	1.55	1.59	2.09	1.20	1.40	1.37
Diphtheria.....	1.88	2.31	1.83	3.90	4.53	2.86	2.93	3.04
Dysentery.....	1.06	.78	.68	1.13	1.04	1.11	1.14	1.25
Fevers.....	5.12	3.24	2.93	2.87	2.00	3.58	2.29	2.26
Heart, Diseases of.....	6.35	5.60	6.48	6.20	6.46	6.56	7.35	5.84
Hooping Cough.....	.17	.83	.79	.83	.92	.75	1.23	1.00
Hydrocephalus.....	.87	.81	.31	.41	.41	.47	.20	.37
Kidneys, Diseases of.....	2.43	2.52	3.14	2.64	2.66	3.24	3.38	3.20
Liver, Diseases of.....	.83	.88	.87	1.08	1.34	1.19	1.30	.94
Marasmus.....	2.02	1.62	2.15	.22	1.57	1.16	1.63	.96
Old Age.....	5.22	5.68	4.95	4.69	4.38	4.35	3.63	2.87
Pneumonia.....	7.84	7.14	8.65	8.18	7.70	7.62	7.69	8.20
Scarlatina.....	.64	1.88	1.70	1.50	4.20	3.11	.82	.23

* Not infantile.

TABLE XCIII.

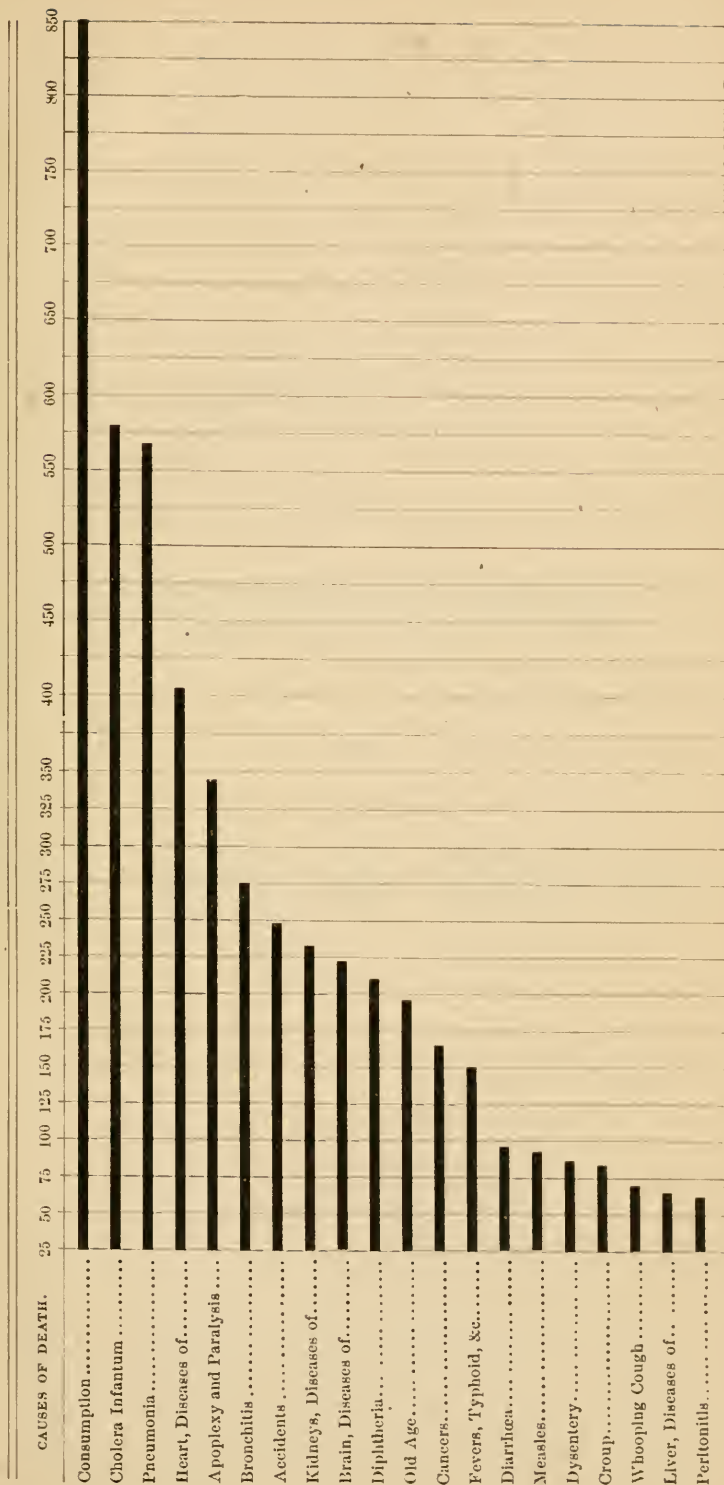
Summary of the Principal Occupations and Causes of Death from June 1, 1852, to January 1, 1889, a period of Thirty-seven Years and Seven Months. Ages under 20 excluded.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Epilepsy.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart Diseases.	Hernia.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Phthisis.	Pleurisy.	Pneumonia.	Rheumatism.	Stomach Diseases.	Suicide.	Tetanus.	
<i>Males.</i>																																
AGENTS.....	104	6	3	5	...	3	2	1	2	7	7	...	1	11	4	2	1	40	1	10	...	2	Stomach Diseases.	...	Phthisis.	...	Pneumonia.	...	Rheumatism.	...	Suicide.	...
BAKERS.....	92	5	...	12	1	...	3	...	...	3	1	1	5	1	...	1	3	8	1	1	6	3	5	...	20	...	4	3	2	1	...
BANKERS AND BROKERS.....	81	3	...	10	...	2	3	...	3	5	1	1	...	...	1	1	3	9	...	1	10	2	5	...	9	...	9	...	...	3	...
BARBERS.....	118	6	3	8	1	...	3	8	2	2	...	2	1	1	...	1	5	11	...	...	6	2	2	2	68	...	11	1	...	2	...
BLACKSMITHS.....	413	22	12	44	1	...	9	17	2	13	...	9	11	2	4	1	18	28	...	1	15	12	33	3	118	...	34	3	5	6	...	
BLEACHERS.....	40	1	...	1	1	...	1	2	...	1	...	2	...	...	1	2	2	2	...	...	1	...	...	3	2	14	2	3	...	1	...
BOILERMAKERS.....	39	4	3	6	...	...	2	...	2	...	...	1	...	...	...	1	3	1	...	...	...	...	...	14	...	1	1	...	...	1	...
BOOKBINDERS.....	18	...	1	...	...	...	2	2	...	...	...	...	...	1	...	...	1	1	...	...	...	...	1	2	...	6	...	1	...	...	...
BOOK-KEEPERS.....	247	15	4	21	1	3	1	8	3	1	4	1	3	...	2	11	19	1	18	7	6	1	85	1	23	1	2	4	1	...
CABINETMAKERS.....	92	3	1	8	1	3	5	1	...	2	1	1	1	...	1	...	9	...	...	...	3	5	15	...	23	1	5	...	1	...	...
CALICO-PRINTERS.....	48	2	5	4	1	...	1	1	...	2	...	1	1	...	...	...	6	...	...	...	...	...	...	3	...	13	...	3	...	...	...
CARPENTERS.....	1,278	105	18	101	2	12	34	42	11	43	5	31	24	5	9	1	63	106	3	11	46	26	98	9	352	5	106	12	15	23	2	...
CARRIAGE MAKERS AND TRIMMERS.....	50	2	...	6	...	...	...	1	2	3	...	1	1	1	1	1	1	2	...	...	5	4	2	...	14	...	4	...	...	1	...
COGNACMAKERS.....	72	2	2	1	...	1	...	1	2	5	...	...	...	...	...	3	4	...	...	3	2	3	...	32	...	7	1	2	...	...	...
CLERGYMEN.....	158	3	...	20	...	2	1	3	6	5	2	5	1	1	1	5	18	4	6	12	17	...	21	...	19	1	1	3
CLERKS AND SALESMEN.....	594	21	7	30	...	4	15	14	7	10	4	7	...	3	2	1	62	46	...	6	33	6	2	5	206	1	76	9	5	9
CONFECTIONERS.....	29	1	...	1	1	1	...	1	1	1	...	2	1	2	2	1	8	...	2	1
COOPERS.....	99	3	1	14	1	2	3	1	2	1	1	1	2	...	1	1	4	7	2	1	3	3	17	...	18	1	7	2
DENTISTS.....	15	2	1	1	1	1	3	2	1	...	2	...	2

TABLE XCIII. — Continued.

OCCUPATIONS.																															
Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Diabetes.	Dysentery.	Dropsy.	Epilepsy.	Erysipelas.	Fevers, Typhoid, etc.	Heart Diseases.	Hernia.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Pleurisy.	Pneumonia.	Rheumatism.	Stomach Diseases.	Suicide.	Tetanus.				
DYERS	69	4	...	4	1	...	4	2	1	1	...	3	2	1	1	...	9	7	...	1	...	6	...	15	...	1	1	...			
ENGINEERS AND FIREMEN.....	193	34	2	16	1	5	1	4	2	5	1	2	2	...	1	7	20	...	1	14	7	3	1	43	...	3	...	...	
ENGRAVERS.....	85	3	1	6	...	...	3	2	2	2	...	...	5	1	...	5	10	...	2	1	2	1	32	...	1	1	...				
FARMERS, ETC.....	4,735	193	38	532	16	81	102	116	34	208	30	95	186	14	52	7	236	468	16	26	121	105	833	9	655	29	381	40	37	63	11
FILE-CUTTERS.....	37	...	1	3	...	...	2	9	1	...	...	...	1	...	...	2	...	...	...	...	...	1	18	...	...	4	...	...	2	...	
FISHERMEN AND OYSTERMEN.....	147	24	2	6	...	1	2	5	...	4	2	1	5	...	2	14	11	...	1	4	3	19	...	26	...	8	2	1	2	2	...
GASTRITIS.....	31	...	2	4	...	...	...	...	3	...	...	...	...	...	...	1	...	...	3	...	...	...	14	...	2	...	1	...	2	...	...
GROCEERS	298	4	5	35	4	7	3	12	3	13	2	5	2	1	5	2	14	95	...	3	11	12	22	4	59	2	30	1	4	5	...
HARNESSEMAKERS AND SADDLERS.....	79	5	2	4	...	...	...	4	1	2	1	2	1	1	...	3	6	...	...	4	1	3	...	26	...	7	...	2	...	3	...
HOTEL-KEEPERS.....	93	1	1	11	...	1	3	5	...	...	...	1	3	...	1	2	13	...	3	5	9	4	18	...	1	6	1	...	4	...	
JEWELERS	628	24	11	43	2	5	8	11	9	9	3	13	6	2	6	1	37	51	1	13	23	15	4	2	276	...	21	3	8	11	...
LABORERS.....	5,968	547	138	306	32	47	163	124	104	135	15	141	86	20	38	20	307	396	13	33	150	121	462	18	1,892	33	550	44	60	53	10
LAWYERS	110	2	1	16	...	...	...	...	1	...	...	1	1	1	1	...	5	18	1	4	10	5	6	...	20	...	6	1	...	...	...
MANUFACTURERS.....	391	17	2	53	3	10	8	17	6	18	5	4	7	...	1	23	48	2	4	23	8	19	2	57	1	32	2	7	6	...	
MACHINISTS.....	856	49	8	77	2	7	11	32	8	20	6	18	16	4	6	...	41	73	1	6	34	14	33	2	284	7	95	6	13	12	...
MASONS	524	35	6	49	2	9	9	14	9	27	3	5	9	...	2	23	42	1	6	26	7	48	4	96	2	67	3	13	5	...	
MERCHANTS.....	830	15	4	107	3	13	23	47	8	32	6	20	13	11	9	...	40	108	1	12	48	24	60	3	126	4	72	3	9	8	1
MILLERS	31	5	1	3	...	...	1	...	1	...	...	1	...	...	1	...	...	1	1	...	1	3	...	7	...	3	...	...	1	...	...
MOULDERS	163	10	2	14	...	...	2	2	3	4	1	4	1	...	...	13	9	...	3	3	1	3	...	50	...	32	2	2	2	...	...
MUSICIANS	40	3	1	6	...	...	...	...	1	1	...	...	1	...	...	2	3	...	3	1	...	1	...	8	...	3	1	1	...	...	...
OPERATIVES.....	1,376	91	18	58	10	6	32	34	24	31	5	30	22	3	8	5	96	96	6	15	40	29	30	7	495	7	124	14	19	20	1
PAINTERS AND GLAZIERS.....	476	35	9	58	...	7	11	13	2	12	1	17	5	1	2	1	9	51	1	10	16	10	16	2	127	4	44	3	5	4	...

Diagram III. Exhibiting the comparative mortality by absolute number of decedents, from twenty principal causes of death in Rhode Island, in 1890.



APPENDIX A.

NOMENCLATURE OF DISEASES,

OR

CAUSES OF DEATH.



NAMES OF CAUSES OF DEATH.

It should be stated that the nomenclature of diseases in the nosological arrangement on the following pages is not intended to include the names of the whole list of morbid phenomena affecting the human organism, but the names of such only as are directly the **cause of death**, or such as ordinarily predispose to or set in motion the morbid processes that end in death.

In the construction of the classification now adopted, use has been made of the results and conclusions of a committee of the Royal College of Physicians of England, and from such other sources as were accessible, and from examination of the classifications in use in different countries in Europe and America. It has been the design to have all these classifications based on observed facts and most advanced conclusions in relation to pathological processes and morbid conditions, inductive, causative, progressive and ultimate.

The statistical nosology will consist of two lists of causes of death,

A TABULAR LIST AND SUPPLEMENTAL LIST.

The **TABULAR LIST** comprises the chief or primary causes of death which will be used in Table IX, on Classification and Percentage, in the preparation of the Registrar's annual reports, and will, therefore, include all those named in the **SUPPLEMENTAL LIST**, when the final arrangement is completed.

The **SUPPLEMENTAL LIST** is Subordinate to the **TABULAR LIST**, and contains synonyms, or names of related diseases, which may be actually, or are supposed to be, causes of death, and which are in addition to those in the **TABULAR LIST**, and which are often found in **PHYSICIAN'S certificates of death**, as reported to the State Registrar. These will have a place, in alphabetical order, in Tables VII and VIII of the reports, and will be variously grouped under different heads in Table IX, as the figure which precedes each cause in the **SUPPLEMENTAL LIST** will correspond, in the representation of diseased conditions, with the figure in the class and order in the **TABULAR LIST**, under which that cause is placed.

NOMENCLATURE OF CAUSES OF DEATH.

CLASSES.

- I. General Diseases.—A. SPECIFIC AND FEBRILE. (*Zymotic.*)
- II. General Diseases.—B. CACHECTIC. (*Constitutional.*)
- III. Special Diseases.—A. FUNCTIONAL OR ORGANIC. (*Local.*)
- IV. Special Diseases.—B. DEVELOPMENTAL. (*Developmental.*)
- V. Violence. —C. FROM INJURIES, ETC. (*Violent.*)

SUB GROUPS OR ORDERS.

CLASS I.—Zymotic Diseases.

ORDER ONE, Miasmatic. ORDER TWO, Enthetic. ORDER THREE, Dietic. ORDER FOUR, Parasitic.

CLASS II.—Constitutional Diseases.

ORDER ONE, Diathetic. ORDER TWO, Tubercular.

CLASS III.—Local Diseases.

ORDER ONE, Diseases of the Nervous System. ORDER TWO, Organs of Circulation. ORDER THREE, Organs of Respiration. ORDER FOUR, Organs of Digestion. ORDER FIVE, Urinary Organs. ORDER SIX, Reproductive Organs. ORDER SEVEN, Osseous and Locomotory Organs. ORDER EIGHT, Integumentary System.

CLASS IV.—Developmental Diseases.

ORDER ONE, Of Children. ORDER TWO, Of Women. ORDER THREE, Of Old Age. ORDER FOUR, Of Nutrition.

CLASS V.—Deaths by Violence.

ORDER ONE, Accidents and Negligence. ORDER TWO, Homicide. ORDER THREE, Suicide.

STATISTICAL NOSOLOGY.

CLASS I.—Zymotic Diseases.

TABULAR LIST.

For Table IX of the Registration Report.

ORDER One.—Miasmatic.

- I. One.—1. Carbuncle
 2. Cholera, Asiatic
 3. Cholera, Sporadic
 4. Cholera Infantum
 5. Cholera Morbus
 6. Croup (Pseudo Membranous).
 7. Diphtheria
 8. Diarrhœa
 9. Dysentery
 10. Erysipelas
 11. Fever, Bilious
 12. Fever, Cerebro Spinal
 13. Fever, Intermittent
 14. Fever, Malarial
 15. Fever, Typhoid
 16. Fever, Typho-Malarial
 17. Fever, Unspecified
 18. Fever, Yellow
 19. Influenza (Epidemic)
 20. Measles
 21. Mumps
 22. Metria (Puerperal Fever)
 23. Pertussis
 24. Tonsillitis
 25. Scarlatina
 26. Small Pox
 26. Varicella

ORDER Two.—Enthetic.

- I. Two.—1. Glanders
 2. Gonorrhœa
 3. Hydrophobia
 4. Malignant Pustule
 5. Septicæmia
 6. Syphilis

ORDER Three.—Dietic.

- I. Three.—1. Alcoholism
 2. Delirium Tremens
 3. Inanition
 4. Purpura and Scurvy

ORDER Four.—Parasitic.

- I. Four.—1. Aphthæ
 2. Worms
 3. Other Parasites

SUPPLEMENTAL LIST.

Synonyms or Related Diseases.

ORDER One.—Miasmatic.

- I. One.—1. Anthrax.
 Gangrenous Boil.
 4. Entro Colitis, { Infau-
 Gastro Enteritis, { tile.
 10. Hospital Gangrene.
 Pyæmia.
 Phagedæna.
 Phlegmon.
 15. Infantile Fever.
 Typhus Fever.
 20. Rotheln.
 21. Parotitis.
 22. Child-bed Fever.
 23. Hooping Cough.
 24. Quinsy.
 25. Scarlet Fever.
 Angina Maligna.
 26. Varioloid.
 27. Chicken Pox.
 Milliaria.

ORDER Two.—Enthetic.

- I. Two.—2. Stricture of the Urethra.
 Gonorrheal Ophthalmia.
 5. Necusia.

ORDER Three.—Dietic.

- I. Three.—1. Intemperance.
 3. Privation.
 Starvation.
 Neglect.

ORDER Four.—Parasitic.

- I. Four.—1. Thrush.
 2. Tape Worm.
 Trichiaunsis.
 3. Scabies.
 Hydatids.
 Porrigo, Favus, etc.

CAUSES OF DEATH.

CLASS II.—Constitutional Diseases.

TABULAR LIST.

ORDER One.—Diathetic.

- II. One.—1. Gout
 2. Dropsy
 3. Anæmia
 4. Cancer, Various
 5. Cancer of Breast
 6. Cancer of Stomach
 7. Cancer of Uterus
 8. Noma (Canker)
 9. Mortification
 10. Rheumatism

ORDER Two.—Tubercular.

- II. Two.—1. Scrofula
 2. Tabes Mesenterica
 3. Phthisis (Pulmonary)
 4. Hydrocephalus
 5. Tubercular Meningitis

SUPPLEMENTAL LIST.

- II. One.—2. Anasarca.
 3. Leucocythæmia. †
 Chlorosis.
 4. Soft Cancer.
 Epithelioma.
 Melanosis.
 Lupus.
 Other kinds of Cancer.
 9. Bed Sore.
 Dry Gangrene.
 10. Rheumatic Carditis.
 Rheumatic Synovitis.
 Rheumatic Meningitis.
- II. Two.—1. Psoas (Lumbar) Abscess.
 White Swelling.
 Cretinism (Goitre).
 Adenitis.
 Morbus Coxarius.
 Pott's Disease.
 2. Tubercular Peritonitis.
 3. Hæmoptysis.

CLASS III.—Local Diseases.

ORDER One.—Nervous System.

- III. One.—1. Cephalitis
 2. Cerebritis
 3. Apoplexy
 4. Paralysis
 5. Insanity
 6. Chorea
 7. Epilepsy
 8. Tetanus
 9. Convulsions
 10. *Brain Diseases**

ORDER Two.—Circulatory System.

- III. Two.—1. Pericarditis
 2. Aneurism
 3. *Heart Diseases**

- III. One.—1. Phrenitis.
 Meningitis.
 Cerebro Spinal Meningi-
 tis. (Sporadic.)
 5. Monomania.
 Fright.
 Grief.
 Melancholia.
 Dementia.
 Rage.
 6. Hysteria.
 8. Laryngismus.
 Lockjaw.
 Trismus Nascentium.
 10. Neuralgia, Cerebral.
 Neurasthenia.
 Disease of Spinal Cord.
 Necrencephalus (Ramol-
 lissement).

- III. Two.—1. Carditis.
 Endocarditis.
 3. Hypertrophia.
 Atrophia.
 Angina Pectoris.
 Syncope.
 Arteritis.
 Ossification of Arteries.
 Phlebitis.
 Hydropericardium.
 Embolus.
 Thrombosis.

* Not otherwise placed.

STATISTICAL NOSOLOGY.

CLASS III.—Local Diseases.—Continued.

TABULAR LIST.

ORDER THREE.—Respiratory System.

- III. Three.—1. Epistaxis
 2. Laryngitis
 3. Bronchitis, Acute
 4. Bronchitis, Chronic
 5. Pleurisy
 6. Pneumonia
 7. Asthma
 8. *Lung Diseases**

ORDER FOUR.—Digestive System.

- III. Four.—1. Gastritis
 2. Enteritis
 3. Peritonitis
 4. Ascites
 5. Ulceration of Intestines
 6. Hernia
 7. Ileus
 8. Intussusception
 9. Stricture of Intestines
 10. Fistula
 11. *Stomach Diseases**
 12. *Pancreas Diseases**
 13. Hepatitis
 14. Jaundice
 15. *Liver Diseases**
 16. *Spleen Diseases**
 17. *Bowel Diseases**

ORDER FIVE.—Urinary System.

- III. Five.—1. Nephritis
 2. Ischuria
 3. Nephria (Bright's Disease)
 4. Diabetes
 5. Calculus (Gravel, &c.)
 6. Cystitis
 7. Prostate, Disease of
 8. *Kidney Diseases**
 9. Bladder, Diseases of
 10. Testicles, Disease of

ORDER SIX.—Generative System.

FEMALE.

- III. Six.—1. Ovarian Dropsy
 2. *Diseases of Uterus**

SUPPLEMENTAL LIST.

- III. Three.—2. Edema Glottidis.
 5. Empyema.
 Diaphragmitis.
 Pneumothorax.
 Hydrothorax.
 6. Pulmonary Apoplexy.
 Hemoptysis.†
 Congestion of Lungs.
 7. Grinders' Asthma.
 Miners' Asthma.
 Emphysema.

- III. Four.—1. Glossitis.
 Stomatitis.
 Pharyngitis.
 Esophagitis
 2. Gastro Enteritis, } Not
 Entero Colitis. } In-
 5. Perforation of.— fan-
 6. Congenital. tile.
 Femoral.
 Inguinal.
 Scrotal.
 Umbilical.
 Ventral.
 7. Constipation.
 Obstipation.
 Perityphlitis.
 Typhlitis.
 9. Strict (Esophagus.
 11. Dyspepsia.
 Pyrosis.
 Gastralgia.
 Hematemesis.
 Melena.
 14. Gall-stones.
 15. Cirrhosis.

- III. Five.—3. Albuminuria.
 6. Cystirrhœa.
 8. Dinresis.
 Hematuria.
 Uræmia.
 9. Urethritis.
 10. Orchitis.
 Hydrocele.

- III. Six.—1. Ovarian Tumor.
 2. Hysteritis Metritis.
 Uterine Ulcer.
 Polypus, Tumor Fibroid.
 Ovaritis.
 Pelvic Cellulitis.

* Not otherwise placed.

† See Class II, Order Two—3, Sup. List.

CAUSES OF DEATH.

CLASS III.—Local Diseases.—Continued.

TABULAR LIST.

ORDER Seven.—Osseous and Locomotory System.

- III. Seven.—1. Bones, Diseases of . . .
 2. *Joint Diseases** . . .
 3. *Vertebræ*, Diseases of . . .

ORDER Eight.—Integumentary System.

- III. Eight.—1. *Phlegmon*† . . .
 2. *Ulcer* . . .
 3. *Skin Diseases* . . .

ORDER Nine.—Organs of Special Sense.

EYE AND EAR.

- III. Nine.—1. *Malignus Oculi* . . .
 2. *Ophthalmitis* . . .
 3. *Ossis Petrosi* . . .
 4. *Otitis* . . .

SUPPLEMENTAL LIST.

- III. Seven.—1. *Ostitis*.
Periostitis.
Fragilitas Ossium.
Mollities Ossium.
Rickets.
Caries, Necrosis.
Exostosis.
 2. *Synovitis*.
Hip Diseases.
 3. *Spine Diseases*.
Spine, Caries and Necrosis.

- III. Eight.—1. *Abscess*, part not stated.
Boil.
Whitlow.
 3. *Roseola*.
Urticaria.
Eczema.
Herpes.
Pemphigus.
Ecthyma.
Impetigo.
Psoriasis, &c.
Dermatitis (from burns, &c.).

CLASS IV.—Developmental Diseases.

ORDER One.—Developmental Diseases of Children.

- IV. One.—1. *Still born* . . .
 2. *Debility, Infantile* . . .
 3. *Debility, Premature Birth* . . .
 4. *Cyanosis* . . .
 5. *Spina Bifida* . . .
 6. *Other Malformations* . . .
 7. *Teething* . . .
 8. *Innutrition* . . .

- IV. One.—2. *Asthenia*.
 4. *Atelectasis Pulmonum*.
 6. *Anus Imperforatus*.
Cleft Palate.
Idiocy.
 8. *Mainutrition*.

* Not otherwise placed. † See Class II, Order Two—1, Sup. ‡ See Class I, Order One—10, Sup.

STATISTICAL NOSOLOGY.

CLASS IV.—Developmental Diseases.—Continued.

TABULAR LIST.

ORDER Two.—Developmental Diseases of Women.

- IV. Two.—1. Paramenia
 2. Childbirth*

ORDER Three.—Developmental Diseases of Old People.

- IV. Three.—1. Old Age

ORDER Four.—Diseases of Nutrition. Adolescent and Adult.

- IV. Four.—1. Atrophy
 2. Debility

SUPPLEMENTAL LIST.

- IV. Two.—1. Amenorrhœa.
 Chlorosis.†
 Climacteria.
 Menorrhagia.
 2. Miscarriage.
 Abortion.
 Puerperal Mania.
 Puerperal Convulsions.
 Phlegmasis Dolens.
 Cæsarian Operation.
 Extra-Uterine Fœtation.
 Flooding.
 Retention of Placenta.
 Presentation of Placenta.
 Deformed Pelvis.
 Mammary Abscess.

- IV. Four.—1. Marasmus.
 Malnutrition.
 2. Asthenia.
 Exhaustion.

CLASS V.—Deaths by Violence.

ORDER One.—Accident or Negligence.

- V. One —1. Fractures and Contusions .
 2. Wounds, Unspecified . . .
 3. Burns and Scalds . . .
 4. Poison
 5. Drowning
 6. Suffocation
 7. Various

ORDER Two.—Homicide.

ORDER Three.—Suicide.

- V. Three.—1. Wounds, Unspecified .
 Wounds, Pistol or Gunshot.
 Wounds, Knife
 2. Poison
 3. Drowning
 4. Hanging
 5. Otherwise

- V. One.—1. Railroad and other Accidents.
 5. Lost at Sea.
 6. Asphyxia.
 Strangulation.
 7. Exposure.
 Cold Water.
 Frozen.
 Heat.
 Lightning.
 Surgical Operation.

- V. Two.—1. Infanticide.
 Patricide.
 Matricide.
 Fratricide.
 Filicide, &c.

* See Class I, Order One—22, Tab. List.

† See Class II, Order One—3, Sup.

SUGGESTIONS

CONCERNING

PHYSICIANS' CERTIFICATES OF DEATH.

It should be the endeavor to specify the causes of death as definitely and correctly as possible. It is not unusual to find a return of death with the physician's certificate naming the cause of death "Paralysis," "Paraplegia," "Fits," "Convulsions," "Dropsy," etc., which are merely secondary or consecutive causes, simply symptoms only, or results of some organic lesion or pathological derangement. Sometimes **the alleged cause** is really the *final cause*, as in a case of termination of life by paralysis, but the cause given as paralysis **is not the determining cause**. Apoplexy, or some lesion of the nervous centres, must be the original and determining cause of paralysis, paraplegia, hemiplegia, etc., and the determining cause should be stated as the primary in the return or certificate.

Convulsions are the symptoms or results of some antecedent or concurrent disease. They follow meningitis and other structural lesions of the nervous centres: they also occur from reflex derangement or disturbance of the nervous centres, as, in children, from intestinal irritation, or from inflammation, as in gastritis, enteritis, nephritis, etc. In such cases they may be contributory to death, and perhaps, in rare instances, a final cause, by inducing or taking the form of tonic or tetanic spasm. But as contributory, or as a final cause, they are simply concomitant. They should find place as secondary causes only in certificates of death.

"Fits" is too unmeaning a term to be used in any case. The word in a medical sense means a paroxysm or spasm or an attack, or succession of attacks of some physical or mental disturbance, as "a fit of apoplexy," "a fit of melancholia," etc., and is not properly used as synonymous with convulsions from any cause. It would be just as sensible to attribute a death to a "paroxysm," an "occurrence" or an "attack" as a cause, as to "fits," without some qualification.

"Dropsy" and "Ascites" have been allowed to stand as determining causes of death because of extended use, and because of the obscurity with which their causes in rare instances are involved. We can scarcely conceive of a dropsical accumulation without antece-

dent organic or functional disorder, derangement of the absorbent or secretory system, or depravation of the blood. They are left in the tabular list with not a little reluctance. Paralysis, with cause unspecified, is also left in the tabular list for a like reason, and with the same doubt of propriety.

It may be suggested that it is sometimes difficult, and occasionally impossible to ascertain positively the chief or leading cause of death. The physician last in attendance may find several functional or structural diseases, the morbid conditions multiple and complex, and not only the initial derangement, but the succession of morbid processes, proximate, consecutive and ultimate, inextricably entangled and lost to discovery.

The careful diagnostician will, however, even then be able to *conceive the probable leading cause*, but whether or not, he will be able at least **to ascertain the most prominent and controlling lesion or functional derangement then existing**, and which may reasonably be accepted as the chief cause of death.

The preceding remark applies very properly to cases of adventitious diseases which prove fatal, when occurring in individuals already suffering from some chronic disease of slower progress, as when fatal dysentery attacks a consumptive person, or one having chronic nephritis dies from pneumonia. **The acute disease occurring independently of the chronic disease is the chief cause of death**, although the fatal event may have been made more sure by the existence of the antecedent disease, and although the antecedent disease would have ultimately caused death.

In attributing death to scrofula, tuberculosis, tumor, cancer and other generic terms, as causes, **the organic structure or locality where the disease is developed** should always be given, if possible, otherwise such terms are very indefinite.

The objects desired in presenting the preceding nomenclature of causes of death, and the suggestions following, are to subserve the purpose of greater uniformity and precision in the use of nosological terms, and to promote the accomplishment of entire definiteness, accuracy and completeness in the physicians' certificates of causes of death.

The State of Rhode Island has a leading reputation for the completeness of its vital statistics. It is not excelled, if equalled, by any State in the Union. With the exception of two or three, there are no States that have even any approximate completeness of numbers of decedents, and fullness of statements of fact connected therewith. It is hoped that the physicians of Rhode Island will feel a professional and patriotic interest in the continued elevation of the reputation of the State as a collector of accurate and complete vital statistics.

APPENDIX B.

THE LAWS OF RHODE ISLAND

IN RELATION TO THE REGISTRATION OF

BIRTHS, MARRIAGES AND DEATHS, AND OF DIVORCE.

PUBLIC STATUTES, CHAPTER 85, AND PUBLIC LAWS, CHAPTER 747.

OF THE REGISTRATION OF BIRTHS, DEATHS AND MARRIAGES.

SECTION 1. The town clerks of the several towns, or any person whom the board of aldermen of any city, or the town council of any town may appoint for that purpose, shall obtain, chronologically record and index, as required by the forms prescribed by section three of this chapter, all information concerning births, marriages and deaths occurring among the inhabitants of their respective towns; and on or before the first Monday in March, annually, shall make duly certified returns thereof to the secretary of the state board of health, for the year ending on the thirty-first day of December next preceding, accompanying the same with a list of the persons required by law to make returns to them, who have neglected to do so, and with such remarks relating to the object of this chapter as they may deem important to communicate.

SEC. 2. The secretary of the state board of health shall receive the returns made in pursuance of the preceding section, and annually make a general abstract and report thereof, in form as prescribed by section three of this chapter, and publish not exceeding one thousand copies thereof, and for preparing, tabulating and publishing said annual report the sum of five hundred dollars shall be paid to the state registrar. Said returns, after such report is prepared, shall be deposited in the office of the secretary of state, who shall cause the same to be arranged, full alphabetical indices of all the names to be made, and the whole to be bound in volumes of convenient size and carefully preserved in his office.

SEC. 3. The blank forms required to carry out the provisions of this chapter shall, on application, be furnished by the secretary of the state board of health to clergymen, physicians, undertakers, town clerks, clerks of meetings of the Society of Friends, and other persons requiring them substantially as follows : The record of a birth shall state the date and place of birth, name and sex of the child, whether born alive or still-born, the name and surname, color, occupation, residence and birthplace of the parents, and the time of recording, so far as the same can be ascertained. The record of a marriage shall state the date of the marriage, place, name, residence and official station of the person by whom married, names and surnames of the parties, age, color, occupation and residence of each, condition, that is, whether single, widowed or divorced, what marriage, that is, whether first, second, third or other marriage, the occupation, birthplace and name of their parents, and the time of recording, so far as the same can be ascertained. The record of deaths shall state the date of death, name and surname of the deceased, the sex, color and condition, whether single or married, age, occupation, place of death, place of birth, names and birthplace of parents, disease or cause of death, and the time of recording, so far as can be ascertained.

SEC. 4. Every meeting of the Society of Friends, clergyman, and all others authorized to join persons in marriage, shall make a faithful record of every such rite performed by them, in manner and form aforesaid, and return the same for the last preceding month, on or before the second Monday of every month, to the town clerk of the town in which such rite shall have been performed ; and no marriage shall be solemnized until the parties shall have signed and delivered to the person about to solemnize it, or to the clerk of a meeting of the Society of Friends, a certificate containing the information required for the record of a marriage, as prescribed by this chapter.

SEC. 5. The town clerk of every town shall annually, in the month of January, collect the information required by this chapter, in relation to all children born in the town during the year ending on the thirty-first day of December next preceding.

SEC. 6. Whenever any person shall die, or any still born child shall be brought forth in this state, the physician attending at such bringing forth or last sickness, if any physician so attended, shall, within forty-eight hours after such death or bringing forth, leave with the family, if any, or person having the care of the deceased, or the person bringing forth such still born child, or give to the undertaker or person who conducts the funeral a certificate stating, in case of a death, the name of the deceased, the date of the death, and the disease or cause of the death, and in case of the bringing forth of a still born child, the date and the cause of such child being brought forth still born. Provided, however, if the physician last in attendance shall not have knowledge of such death, or is otherwise reasonably prevented from leaving with the family or giving the undertaker such certificate within the time hereinbefore specified, or before the funeral or disposal of the remains of the deceased, he shall, within five days after having

knowledge of such death by notification or otherwise, send to the town or city clerk or registrar of the town or city in which such death occurred a certificate, stating the name, date and disease or cause of death of such decedent.

SEC. 7. Every town council may appoint a sufficient number of persons to act as undertakers, removable at the pleasure of such council.

SEC. 8. No undertaker or other person shall conduct a funeral, or bury or deposit in a tomb, or remove from this state, or otherwise dispose of the remains of any deceased person or still born child unless he shall first obtain the physician's certificate required by section six of this chapter, if a physician was in attendance upon such person who has deceased, or the person bringing forth such still born child, and shall return the same, together with his own certificate of the information required by section three of this chapter, to the town clerk of the town where such death or bringing forth took place. Provided, however, that in such towns as allow the burial or removal of the bodies of deceased persons without a permit from the town clerk, and the undertaker or other person who has charge of the disposal of the remains of the deceased person is unable to obtain the said physician's certificate, after reasonable attempts therefor before the burial or removal of the said remains, then the said undertaker or other person shall make his return as required by section three of this chapter, including the cause of death and the name of the physician last in attendance upon the deceased, immediately to the town or city clerk or registrar of the town or city in which the death occurred. He shall, also, within two days thereafter, notify the physician last in attendance upon the deceased person of the name and date of death of the same.

SEC. 9. Any town may make ordinances more effectually to attain the objects herein contemplated.

SEC. 10. The town clerks, or persons appointed as aforesaid, shall receive for each record of a death made and returned as required by law, and for each record of a marriage made and returned as required by law, twenty cents, to be paid to them out of their respective town treasuries: *Provided*, that the yearly compensation to be paid out of the town treasury as aforesaid, to any one town clerk or person appointed as aforesaid, who shall perform the duties prescribed by this chapter shall not be less than five dollars. Undertakers and others making returns of death as required by sections six and eight of this chapter, shall receive for each full report of a death made to the town clerk five cents in the cities of Providence and Newport, and ten cents in the other towns of the state.

SEC. 11. Every clergyman, physician, undertaker, town clerk, clerk of any meeting of the Society of Friends, or other person who shall wilfully or unreasonably neglect or refuse to perform any of the duties imposed on or required of him by this chapter, shall be fined not exceeding twenty dollars nor less than two dollars for each offence, one-half thereof to the use of the town in which the offence shall occur, and one-half thereof to the use of the person who shall complain of the same.

SEC. 12. Every clergyman, physician, coroner, undertaker, medical examiner,

or clerk of any meeting of the Society of Friends, shall cause his name, residence and post office address to be recorded in the town clerk's office of the town where he resides.

SEC. 13. No letters of administration or letters testamentary shall be granted by any court of probate, upon the estate of any person, until the death of such person, or the facts from which the same is presumed, shall be duly certified, as near as may be, to the town clerk, in order that the same may be duly registered according to the provisions of this chapter.

SEC. 14. The town clerks of the several towns, the city clerk of the city of Newport, and the city registrar of the city of Providence, shall have the custody of all records of births, deaths and marriages of their respective towns, whether made under the statutes now in force or any former statute, and a certificate signed by them, certifying that any written or printed statement of any marriage, birth or death is a true copy of the record in their custody, shall be admitted as evidence of such marriage, birth or death.

SEC. 15. Births, marriages and deaths of non residents shall be distinguished from those of residents, in the returns, by being arranged separately.

SEC. 16. The secretary of the state board of health may, from time to time, vary the forms of returns, and require such additional information as he may consider necessary to accomplish the object of this chapter.

SEC. 17. The town clerks or other officers appointed under this chapter to collect, record and return the births in the several towns, shall receive fees therefor as follows: For making record and return of these facts as required by law, twenty cents each for the first fifty entries in each calendar year, and ten cents each for each subsequent entry and return; to be paid by the town in which the birth is recorded.

SEC. 18. The town clerks of the several towns, or other persons appointed under this chapter to collect the births in the several towns, shall annually in the month of January collect the facts concerning the births within their respective towns, required by this chapter; and shall, so far as practicable, at the same time collect the census of all persons between the ages of five and fifteen years inclusive, as provided by chapter fifty; and shall receive therefor such compensation as the town council or the board of aldermen of their respective towns or cities shall determine: *Provided*, that the city of Providence shall be exempt from so much of the provisions of this section as relates to the collection of the statistics of births.

SEC. 19. Blanks for the foregoing purposes shall be furnished, on application therefor, on or before the first day of December in the year preceding, by the state board of health for the collection of births, and by the commissioner of public schools for the census aforesaid.

SEC. 20. The person or persons who shall discharge the duties required by section eighteen of this chapter, if other than the town clerk, shall make full

return thereof to the town clerk of his or their town, on or before the tenth day of February next following.

SEC. 21. The returns required to be made by clerks of the supreme court, in relation to divorces, to the secretary of the state board of health, or a prepared abstract thereof, shall be published in the annual report on the births, marriages and deaths in the state.

SYNOPSIS OF THE LAW OF MARRIAGE.

CHAPTER 163, PUBLIC STATUTES.

SECTIONS 1, 2 and 3 show what kindred persons cannot marry, and declare marriages within prohibited degrees null and void.

SECTION 4 makes an exception in favor of Jews, within the degrees of affinity or consanguinity allowed by their religion.

SECTION 5 declares the marriage of persons having a husband or wife living, and of idiots and of lunatics, absolutely void.

SEC. 6. "Any ordained minister or elder of any religious denomination, who shall be *domiciled* in this state, and either justice of the supreme court, may join persons in marriage in any town in the state. (It will be seen that clergymen from other states *cannot* **LAWFULLY solemnize marriages** in Rhode Island.)

SEC. 8. Wardens in the town of New Shoreham may join persons in marriage in said town.

SECTION 9 provides that no minister, elder, magistrate or warden shall join persons in marriage, unless such persons, *if residents of this state*, shall first present (to the clergyman or other person officiating) a certificate properly executed and signed by the town or city clerk or city registrar of the town or city in which *EACH of such persons shall RESPECTIVELY reside*, and *if not residents of this state*, then from the town or city clerk or registrar of the town or city in which the marriage shall be solemnized, to the effect that the said town or city clerk or registrar has *duly recorded the intention* of marriage between the parties named in the certificate, the said certificate also setting forth the names and surnames of the parties, the age, color, occupation, birthplace and residence of each, whether either or both have been before married, and, if before married, whether the marriage intended is the first, second,

third or other marriage, and also whether the condition of either or both persons previously married is that of a divorced person, and the names, occupation and birthplace of each of their parents ; and no town or city clerk or city registrar shall issue such certificate to any minor person under guardianship, unless the consent in writing of the parent or guardian shall have first been obtained thereto: provided, however, such certificate may be issued to a female over eighteen years of age, who has no parent or guardian living in the United States. (The legal minority of both sexes terminates at the age of twenty-one.)

SECTION 10 provides that every Society of Friends, and *every person* authorized to join persons in marriage, *shall certify* upon the certificate required in section nine of this chapter *the time when and the place where* the marriage shall have been solemnized by him, and *shall on or before the second Monday of every month*, return the certificate of every marriage solemnized by him during the last preceding month to the *clerk or registrar* of the TOWN OR CITY *in which such rite shall have been performed*.

SECTION 11 forbids the solemnization of the marriage ceremony, by any person, when lawful objection is made thereto in writing, until such lawful objection be removed.

SECTIONS 12 and 13 provide that any person who shall join persons in marriage without first receiving the certificate required in section nine of this chapter, or otherwise contrary to or in violation of chapter 163 of the Public Statutes, shall be imprisoned not exceeding six months, or fined not exceeding one thousand dollars.

SECTION 14 provides that ALL PERSONS married without duly proceeding as required by chapter 163, shall be fined not exceeding fifty dollars.

SEC. 15. The solemnization of marriage shall be in the presence of two witnesses at least, besides the minister, elder or magistrate officiating.

SECTION 16 relates to marriage among Quakers or Friends, and among Jews, making them valid if in accordance with the forms, rites and ceremonies of the same respectively.

SECTION 17 provides that at least one of the parties to any marriage solemnized according to the manner and form of the Society of Friends, or rites and ceremonies of the Jewish religion shall, before the celebration thereof, sign and deliver to the town or city clerk or city registrar of the town or city in which such marriage is solemnized, the certificate required in section nine.

CHAPTER 167.

OF DIVORCE.

SECTION 1. Divorces from the bond of marriage shall be decreed in case of any marriage originally void or voidable by law, and in case either party is for crime deemed to be or treated as if civilly dead, or, from absence or other circumstances, may be presumed to be naturally dead.

SEC. 2. Divorces shall be decreed for impotency, adultery, extreme cruelty, wilful desertion for five years of either of the parties, or for such desertion for a shorter period of time in the discretion of the court, for continued drunkenness, for neglect or refusal on the part of the husband, being of sufficient ability, to provide necessaries for the subsistence of his wife; and for any other gross misbehavior and wickedness in either of the parties, repugnant to and in violation of the marriage covenant.

SEC. 3. Whenever it shall appear that the absence, adultery, cruelty, desertion or other cause of complaint, as aforesaid, was committed or occasioned by the collusion of the parties, and done and contrived with an intention to procure a divorce, in such case no divorce shall be decreed.

SEC. 4. Whenever a divorce shall be had for the causes of affinity, consanguinity, impotency, idiocy, lunacy or crime of either of the parties, the wife shall have restored to her all her lands, tenements and hereditaments; and a judgment may be passed for a restoration to her of all or such part of the personal estate specifically, or the value thereof, which has come to the husband's hands by virtue of the marriage, as the court from the circumstances of the case shall deem equitable.

SEC. 5. Whenever the divorce shall be occasioned by adultery, or other of the causes aforesaid, done or committed on the part of the wife, the husband shall hold the personal estate not secured to her by law, forever, and her real estate not secured to her by law during his natural life, in case they have had issue born alive of her body during the marriage, otherwise during her natural life only, if he shall survive her.

SEC. 6. The court may, in such case, allow the wife for her subsistence so much of her real and personal estate as they shall deem necessary or proper.

SEC. 7. Whenever a divorce is granted for adultery or crime on the part of the husband, the wife shall be entitled to dower in the same manner as if he were dead, unless the court shall decree alimony, chargeable upon the estate of the husband, instead of such dower.

SEC. 8. Whenever a divorce shall be had for adultery, or for any of the causes aforesaid, done or committed on the part of the husband, the wife shall continue to hold all her property, real and personal, secured to her by law, free from any right in or control over her disposition of the same, either during her life or at her death; and, if there be no issue living, shall be restored to all other her lands, tenements and hereditaments, if any there be.

SEC. 9. In such case the wife shall also be allowed out of the real or personal estate of the husband, or out of both, such alimony as the court shall think reasonable, not exceeding the use of one moiety of his real estate, during the life of the wife, and the property of one-half of his personal estate, having regard to the personal property that came to the husband by the marriage, and his ability.

SEC. 10. If there be issue living at the time of the divorce, the court, with regard to ordering restoration to the wife of such of her lands, tenements or hereditaments, if any, as may not be secured to her by law, and in regard to the amount of alimony to be allowed her out of the property of the husband, may do as they shall judge the circumstances of the case may require.

SEC. 11. Divorces from bed, board, and future cohabitation, until the parties be reconciled, may be granted for any of the causes for which by law a divorce from the bond of marriage may be decreed, and for such other causes as may seem to require the same.

SEC. 12. In case of such divorce, the court may assign to the petitioner a separate maintenance out of the estate or property, of the husband or wife, as the case may be, in such manner, and of such amount as they may think necessary or proper.

SEC. 13. Every petition shall be signed by the petitioner, if of sound mind and of legal age to consent to marriage, otherwise upon application to the court, and after notice to the party in whose name the petition shall be filed, the court may allow such petition to be signed by a guardian or next friend.

SEC. 14. All jurisdiction over divorce, alimony, separate maintenance, or the custody, education, and support of the children of persons divorced or petitioning for a divorce, is vested in the supreme court.

SEC. 15. Said court shall have no cognizance of or jurisdiction over any petition for the same, or either of the same, unless the petitioner shall, at the time of preferring such petition, be a domiciled inhabitant of this state, and have resided therein for the period of one year, next before the preferring of such petition.

SEC. 16. All such petitions shall be filed, heard and tried in the county in which the petitioner shall reside.

SEC. 17. The said court may, by general rule or otherwise, prescribe the notice to be given, within or without the state, on such petitions, and may issue such process as may be necessary to carry into effect all powers conferred upon them in relation to the same.

SECTIONS 18, 19 and 20 contain provisions in relation to citations to adverse party residing without the state, or in parts unknown.

SEC. 21. Whenever any citation, issued under the provisions of this chapter, shall be served by a disinterested person, such person shall return the same, having made oath thereon of the place where, the time when, and the manner in which he shall have made service of the said citations.

SECTION 22 provides for giving and ensuring proper and sufficient notice to the adverse party.

SEC. 23. The said court is empowered to regulate the custody, and provide for the education, maintenance and support of the children of all persons by them divorced or petitioning for a divorce, and of all persons to whom a separate maintenance may be granted, or who may petition for the same; to make such allowance to the wife, out of the estate of her husband, for the purpose of enabling her to prosecute or defend against any such petition for divorce or separate maintenance, in case she has no property of her own available for such purposes, as they may think reasonable and proper; and to make all necessary orders and decrees concerning the same, and the same at any time to alter, amend and annul for sufficient cause, after notice to the parties interested therein.

SEC. 24. The said court may authorize a married woman to whom a divorce from the bond of marriage is decreed to change her name, with the same rights and liabilities as if her name had not been changed.

SEC. 25. After the filing and during the pendency of any petition under this chapter, the supreme court may, as in equity, make such interlocutory decrees, or grant such temporary injunctions as may be necessary, until a hearing can be had before the court.

CHAPTER 198.

OF DIVORCES.

SECTION 5. The clerks of the supreme courts in the several counties shall make returns to the secretary of the state board of health, on or before the first day of March in each and every year, for the year ending on the thirty-first day of December preceding, of all the applications for divorce, showing the number, the number granted, and the causes which are given for the application, but without the names of the parties, in accordance with the blanks which shall be furnished them by the secretary of the state board of health.

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